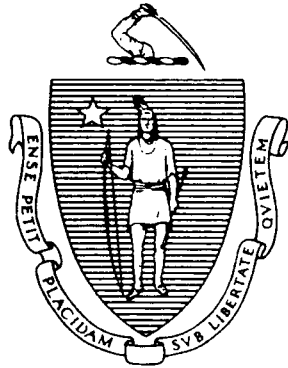


Commonwealth of Massachusetts

Division of Public Employee
Retirement Administration



INVESTMENT REPORT
MASSACHUSETTS CONTRIBUTORY RETIREMENT
SYSTEMS FOR PUBLIC EMPLOYEES

DECEMBER 31, 1994

WILLIAM F. WELD

Governor

ARGEO PAUL CELLUCCI

Lieutenant Governor

CHARLES D. BAKER

Secretary of Administration
and Finance

JOHN J. McGLYNN

Commissioner
Public Employee Retirement Administration

June 16, 1995

1994 was a challenging year for investors worldwide. For the first time in nearly a decade stock indices showed little gain and for the first time in memory, bond markets ended the year sharply lower. The portfolios of Massachusetts public pension funds were not immune from these developments. In sharp contrast to the last several years, fund performance was generally negative as returns closely mirrored general market conditions. However, most funds maintained impressive long term performance as returns of previous years offset the 1994 downturn. During the year, institutional investors suffered major shocks with the demise of Barings, the Orange County bankruptcy and the Kidder - Peabody trading controversy. These events came to represent general results. As will be seen in the tables which follow, Massachusetts retirement systems did not suffer to the same extent as some other institutional investors.

The average return for Massachusetts public pension funds in 1994 was $-.55\%$. In the ten year period ending in 1994, the average return was 10.29% . During that period all but eight systems achieved a return in excess of 8.0% , which for many is the actuarial benchmark.

In last year's report I noted that early 1994 trends indicated that a change in the investment environment was imminent. Board members and their managers were challenged throughout the year as that prediction came true. In general that challenge was met in a mature and patient manner. Board members maintained their focus on the long term and at the end of the year most funds were well positioned to benefit from improving capital markets. Those investors who suffered major losses in 1994 did so in part because of a misguided focus on immediate results.

Recent trends in pension funding will put more pressure on investment performance. This is particularly true in systems which have adopted funding schedules which have deferred amortization of unfunded liability. In this regard it is noteworthy that in 1994 assets of local retirement systems in the aggregate actually declined in value from \$6.301 billion to \$6.258 billion.

I would like to thank the Retirement Board Members and staff, investment managers, consultants and custodians for their cooperation without which this study could not have been conducted.

Sincerely,

A handwritten signature in dark ink, appearing to read "John J. McGlynn", written in a cursive style.

JOHN J. McGLYNN
Commissioner

TABLE OF CONTENTS

PART I:	ANNUAL REPORT OF THE MASSACHUSETTS CONTRIBUTORY RETIREMENT SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 1994.....	1-2
	Table 1: 1994 Returns and Annualized Past Returns.....	3-6
	Table 2: Historical Annual Returns.....	7-10
PART II:	ASSET GROWTH.....	11
	Table 3: Asset Growth.....	12-15
PART III:	FEES AND TURNOVER.....	16-17
	Table 4: Gross and Net Performance/Management, Custodian Bank and Consultant Fees.....	18-21
	Table 5: Portfolio Turnover.....	22-25
PART IV:	INVESTMENT COUNSELORS, CONSULTANTS AND CUSTODIAN BANKS.....	26-50

PART I:

ANNUAL REPORT OF THE MASSACHUSETTS CONTRIBUTORY RETIREMENT SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 1994

Massachusetts public pension monies are invested by 104 retirement boards, the Pension Reserves Investment Management Board (P.R.I.M.) and the Investment Committee of the State Treasurer's Office. Each retirement board is responsible for the assets of its system while the P.R.I.M. Board invests the pension reserve funds of the Commonwealth as well as the assets of local systems which have purchased shares of the Pension Reserves Investment Trust Fund (P.R.I.T.). The Investment Committee of the State Treasurer's Office invests the annuity accounts of the State Employees' Retirement System and the Teachers' Retirement System. This report will provide a rate of return for the State Employees' Retirement System and the Teachers' Retirement System which includes the performance of the Treasurer's Investment Committee and the Pension Reserves Investment Management Board. Although P.R.I.M. is separately listed, the Treasurer's Office is not. The return on the assets, exclusively the responsibility of the Investment Committee of the State Treasurer's Office in 1994, was $-.64\%$.

Since 1985 dramatic changes have taken place in the 107 Massachusetts pension funds. These include a substantial growth in assets, professional management of investments, and the adoption of actuarially based funding schedules. As a result, investment activity is one of the key factors in determining appropriations. Failure to achieve the level of return used in the development of the funding schedule will create an actuarial loss. That loss must be made up through appropriation.

This report details investment performance for one year, three years, five years and the 1985-1994 period. Long term performance is the most important measure of the success or failure of investment strategies. All boards should review the activities of their money managers on a regular basis.

The expected rate of return used in most recent actuarial reports of the Massachusetts systems is 8%. In 1994, the average rate of return was -.55%, from 1992-1994, the average rate of return was 6.12%, from 1990-1994, the average rate of return was 7.70% and from 1985-1994, the average rate of return was 10.29%. (See Figures 1 and 2.)

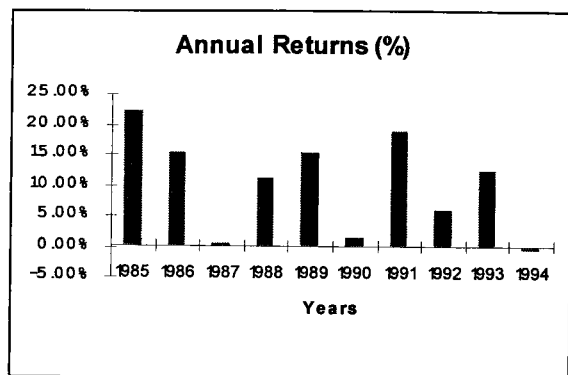


Figure 1

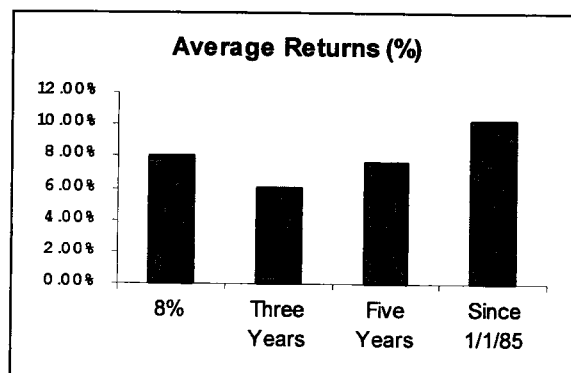


Figure 2

The tables that follow contain this information:

Table One: 1994 Returns and Annualized Past Returns

Table Two: Returns for 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, and 1993;

Please note:

- The State Employees' and Teachers' Retirement Systems invest in a trust administered by the Investment Committee of the State Treasurer (MASTERS Trust). The Office of the Treasurer has reported a return of -.64%. This return differs from that reported in this booklet because the returns reported in this booklet include those assets of the State Employees' and Teachers' Retirement Systems invested with the PRIT Fund.
- PERA employs the generally recognized methodology of the Bank Administration Institute in computing returns.
- Prior to the finalization of performance figures, retirement boards are provided with an opportunity to review the records on which returns are based.

**Annual Report of the
Massachusetts Contributory Retirement Systems
for the year ending December 31, 1994**

Table One

1994 Returns and Annualized Past Returns

Page One

Retirement System	1994		Three Years		Five Years		Since January 1985	
	Return	Rank	Return	Rank	Return	Rank	Return	Rank
ADAMS	-0.46	35	5.83	55	8.06	36	9.78	55
AMESBURY	-1.53	68	5.50	64	8.10	34	9.36	77
ANDOVER	-5.21	105	-0.47	107	7.12	70	10.00	44
ARLINGTON	-0.83	51	5.67	59	7.46	59	10.21	37
ATHOL	-2.10	79	3.55	99	6.73	91	8.93	93
ATTLEBORO	-3.04	92	4.47	87	7.45	60	9.73	59
BARNSTABLE COUNTY	-1.07	54	5.10	72	6.16	100	7.56	102
BELMONT	-1.36	63	6.68	26	8.04	38	9.68	63
BERKSHIRE COUNTY	-1.04	52	6.45	36	8.44	18	9.78	56
BEVERLY	-1.50	66	4.44	88	7.27	68	8.90	94
BLUE HILLS REG VO	-2.50	87	6.07	49	8.19	28	9.35	78
BOSTON	0.75	14	6.50	31	7.36	65	10.51	22
BRAINTREE	-0.61	40	4.84	80	6.66	94	10.09	41
BRISTOL COUNTY	-3.14	94	4.32	92	7.48	57	9.02	90
BROCKTON	-1.81	74	7.98	1	8.44	19	9.73	60
BROOKLINE	-1.75	73	6.71	25	8.76	6	10.13	39
CAMBRIDGE	-1.05	53	7.16	6	7.38	64	9.84	50
CHELSEA	-4.09	100	4.27	94	7.81	45	9.72	61
CHICOPEE	-2.02	76	6.37	38	8.33	21	9.67	65
CLINTON	-0.67	44	6.05	50	6.99	74	8.36	97
CONCORD	-1.18	57	6.14	46	8.51	15	10.07	43
DANVERS	-1.95	75	5.38	67	8.26	24	9.57	68
DEDHAM	0.54	20	6.96	13	6.80	84	10.27	33
DUKES COUNTY	-1.13	55	5.31	69	4.97	107	7.20	106
EASTHAMPTON	-2.34	83	4.50	86	7.79	46	10.41	27
ESSEX COUNTY	-0.46	36	6.33	42	8.01	40	10.42	25
EVERETT	-3.43	97	5.09	73	8.62	10	10.53	20

Table One

1994 Returns and Annualized Past Returns

Page Two

Retirement System	1994		Three Years		Five Years		Since January 1985	
	Return	Rank	Return	Rank	Return	Rank	Return	Rank
FAIRHAVEN	0.82	12	6.95	16	6.82	83	9.82	51
FALL RIVER	-3.63	98	4.34	91	8.02	39	10.52	21
FALMOUTH	1.14	6	3.91	97	8.28	23	10.41	28
FITCHBURG	-1.54	69	3.67	98	7.24	69	9.20	83
FRAMINGHAM	-3.04	93	6.36	40	8.82	4	10.20	38
FRANKLIN COUNTY	-1.49	65	5.77	57	7.93	41	8.61	95
GARDNER	0.66	16	6.95	17	6.83	81	9.89	49
GLOUCESTER	-0.65	42	6.47	33	8.18	30	10.77	11
GREATER LAWRENCE	-3.01	91	5.06	74	7.40	63	7.29	105
GREENFIELD	-3.41	96	6.10	47	8.38	20	9.53	70
HAMPDEN COUNTY	-0.73	48	6.35	41	7.74	48	10.08	42
HAMPSHIRE COUNTY	0.19	26	7.16	7	8.26	25	9.65	66
HAVERHILL	-0.29	32	6.09	48	7.79	47	10.69	12
HINGHAM	0.64	19	6.84	23	6.57	95	9.55	69
HOLYOKE	-0.71	46	6.37	39	8.10	35	11.11	5
HULL	0.19	27	5.35	68	6.78	86	8.15	98
LAWRENCE	-6.17	107	2.33	102	7.06	73	9.14	85
LEOMINSTER	-2.80	89	4.11	95	6.86	77	9.16	84
LEXINGTON	-0.66	43	5.80	56	8.57	13	10.43	24
LOWELL	3.72	2	6.57	28	7.43	61	9.39	76
LYNN	-6.05	106	1.10	106	6.67	93	9.44	73
MALDEN	-4.78	102	2.24	104	7.83	43	9.81	53
MARBLEHEAD	-0.19	30	3.53	100	8.65	9	9.75	58
MARLBOROUGH	-0.14	28	6.47	34	8.23	27	9.90	48
MASS HOUSING FINA	-2.11	80	4.71	84	5.41	104	7.47	103
MASS PORT AUTH	-1.32	61	5.64	60	8.19	29	11.47	3
MASS TURNPIKE AUT	-0.81	50	4.88	78	7.30	67	10.27	34

Retirement System	1994		Three Years		Five Years		Since January 1985	
	Return	Rank	Return	Rank	Return	Rank	Return	Rank
MASS WATER RESOUR	-3.37	95	5.04	76	6.14	101	N/A	N/A
MAYNARD	-3.67	99	4.99	77	5.13	106	7.60	100
MEDFORD	-0.63	41	5.87	54	7.53	56	9.81	54
MELROSE	-0.68	45	6.25	45	7.72	49	10.36	30
METHUEN	-2.15	82	5.44	65	6.77	88	8.95	92
MIDDLESEX COUNTY	0.38	25	6.90	22	8.71	7	10.96	7
MILFORD	-2.08	77	5.06	75	8.61	11	9.01	91
MILTON	0.84	11	7.05	9	6.86	78	10.13	40
MINUTEMAN REG VO	0.66	17	6.96	14	6.68	92	10.26	35
MONTAGUE	0.78	13	6.93	18	6.89	75	9.11	86
NATICK	-0.49	37	5.43	66	8.06	37	10.68	14
NEEDHAM	0.95	9	7.03	10	6.83	82	10.84	8
NEW BEDFORD	-1.61	70	4.42	90	5.88	103	7.43	104
NEWBURYPORT	-2.12	81	5.12	71	8.12	32	9.09	87
NEWTON	-1.46	64	7.06	8	7.54	55	9.82	52
NORFOLK COUNTY	-0.71	47	6.03	52	6.28	99	10.51	23
NORTH ADAMS	-4.94	104	2.28	103	7.57	54	9.62	67
NORTH ATTLEBORO	2.60	3	6.27	43	7.89	42	9.49	71
NORTHAMPTON	-4.69	101	2.17	105	7.61	51	9.27	81
NORTHBRIDGE	0.43	23	6.92	20	6.78	87	9.68	64
NORWOOD	-0.73	49	5.71	58	7.68	50	9.91	47
PEABODY	-0.21	31	6.83	24	8.18	31	10.41	29
PITTSFIELD	-0.36	34	6.50	32	8.33	22	9.99	46
PLYMOUTH	1.56	5	4.08	96	8.50	16	10.66	16
PLYMOUTH COUNTY	5.17	1	7.36	4	8.82	5	10.57	18
PRIM BOARD	0.41	24	6.96	15	6.52	97	10.80	9
QUINCY	-1.29	60	6.04	51	8.12	33	8.61	96

<u>Retirement System</u>	<u>1994</u>		<u>Three Years</u>		<u>Five Years</u>		<u>Since January 1985</u>	
	<u>Return</u>	<u>Rank</u>	<u>Return</u>	<u>Rank</u>	<u>Return</u>	<u>Rank</u>	<u>Return</u>	<u>Rank</u>
READING	0.54	21	6.93	19	6.77	89	9.49	72
REVERE	-2.08	78	4.28	93	6.35	98	7.59	101
SALEM	-0.57	39	5.57	63	7.61	52	9.44	74
SAUGUS	0.72	15	6.99	11	6.79	85	9.33	79
SHREWSBURY	-1.68	72	4.71	85	5.39	105	9.72	62
SOMERVILLE	-1.14	56	4.75	82	6.86	79	9.08	89
SOUTHBRIDGE	0.45	22	7.35	5	8.57	14	9.27	82
SPRINGFIELD	-1.50	67	5.60	62	8.89	3	10.55	19
STATE	-0.30	33	6.52	30	7.47	58	10.62	17
STATE TEACHERS	-0.17	29	6.46	35	7.83	44	10.67	15
STONEHAM	-1.21	59	4.83	81	6.89	76	10.00	45
SWAMPSCOTT	-4.79	103	2.38	101	7.43	62	10.24	36
TAUNTON	-1.18	58	6.53	29	8.67	8	11.90	2
WAKEFIELD	0.66	18	6.92	21	6.75	90	10.69	13
WALTHAM	-2.92	90	5.31	70	8.24	26	10.78	10
WATERTOWN	0.88	10	5.94	53	7.07	72	9.31	80
WEBSTER	2.05	4	4.75	83	6.03	102	7.82	99
WELLESLEY	-2.42	86	7.87	2	10.14	1	12.35	1
WEST SPRINGFIELD	-1.61	71	4.85	79	7.31	66	9.09	88
WESTFIELD	-2.36	85	6.60	27	8.60	12	10.34	31
WEYMOUTH	1.13	8	6.99	12	6.86	80	11.47	4
WINCHESTER	-0.53	38	6.26	44	8.46	17	10.42	26
WINTHROP	1.14	7	7.39	3	8.96	2	10.32	32
WOBURN	-2.63	88	5.62	61	7.59	53	10.99	6
WORCESTER	-1.34	62	6.42	37	7.10	71	9.78	57
WORCESTER COUNTY	-2.34	84	4.44	89	6.55	96	9.41	75

**Annual Report of the
Massachusetts Contributory Retirement Systems
for the year ending December 31, 1994**

Table Two

Historical Annual Returns

Page One

Retirement System	1993 Return	1992 Return	1991 Return	1990 Return	1989 Return	1988 Return	1987 Return	1986 Return	1985 Return
ADAMS	9.19	9.04	17.97	5.37	11.52	6.58	5.35	9.14	26.30
AMESBURY	12.12	6.36	19.50	5.21	14.00	10.95	0.23	10.19	18.62
ANDOVER	2.91	1.08	43.23	-0.12	13.26	10.18	0.95	15.15	26.79
ARLINGTON	9.83	8.33	17.80	3.11	15.81	10.23	3.11	16.64	20.13
ATHOL	6.48	6.50	15.63	7.91	14.09	9.00	3.72	9.82	19.90
ATTLEBORO	10.44	6.48	19.32	5.27	19.11	6.92	2.48	12.91	19.87
BARNSTABLE COUNTY	9.21	7.45	17.72	-1.32	9.15	9.14	-5.48	12.69	21.15
BELMONT	11.45	10.44	20.76	0.41	17.03	10.95	-2.90	9.59	23.88
BERKSHIRE COUNTY	11.35	9.49	18.31	5.08	10.49	9.17	1.83	13.25	21.92
BEVERLY	9.47	5.66	22.64	1.65	10.28	10.64	-0.71	12.97	20.71
BLUE HILLS REG VO	11.41	9.84	19.67	3.83	15.39	9.51	3.09	13.35	11.67
BOSTON	13.74	5.41	21.53	-2.82	20.36	12.73	-3.78	16.12	25.65
BRAINTREE	7.94	7.42	16.64	2.68	13.84	10.59	5.18	16.41	22.88
BRISTOL COUNTY	10.35	6.22	19.18	6.01	15.18	7.70	-1.20	11.43	21.05
BROCKTON	18.10	8.57	20.22	-0.91	11.62	8.12	1.63	12.47	22.38
BROOKLINE	12.41	10.01	23.33	1.54	19.78	9.81	0.95	11.78	16.24
CAMBRIDGE	13.33	9.74	16.01	0.02	10.95	7.91	-2.86	16.69	31.96
CHELSEA	11.05	6.45	21.55	5.70	14.75	9.43	-1.82	13.48	24.06
CHICOPEE	13.09	8.60	18.74	4.39	13.10	12.42	-0.18	10.53	20.23
CLINTON	11.17	8.01	17.73	-0.18	7.65	7.81	-5.31	12.45	28.89
CONCORD	11.57	8.47	20.41	4.48	17.24	10.48	3.68	10.67	16.77
DANVERS	11.97	6.57	20.13	5.79	14.05	10.57	1.70	9.84	19.13
DEDHAM	16.08	4.84	15.46	-1.64	16.43	9.98	3.61	12.67	27.93
DUKES COUNTY	10.50	6.91	10.89	-1.61	8.31	12.01	-4.55	10.68	22.68
EASTHAMPTON	8.37	7.80	17.85	8.20	16.51	12.83	1.99	14.07	20.94
ESSEX COUNTY	11.40	8.43	16.93	4.56	13.07	11.87	-1.19	17.16	25.17
EVERETT	12.24	7.07	23.43	5.57	20.01	6.85	0.98	13.56	22.43

Retirement System	1993 Return	1992 Return	1991 Return	1990 Return	1989 Return	1988 Return	1987 Return	1986 Return	1985 Return
FAIRHAVEN	15.70	4.88	15.31	-1.44	16.59	13.29	4.19	9.68	21.53
FALL RIVER	11.28	5.91	22.01	6.14	18.03	6.41	1.94	15.35	25.14
FALMOUTH	4.32	6.32	23.87	7.09	21.10	9.76	2.30	12.41	18.37
FITCHBURG	7.32	5.43	21.00	5.24	17.14	10.40	1.32	12.41	15.35
FRAMINGHAM	14.57	8.32	20.85	4.94	13.53	9.55	2.63	13.56	19.37
FRANKLIN COUNTY	10.71	8.51	17.18	5.61	11.95	9.51	-0.24	7.73	18.34
GARDNER	15.94	4.82	15.13	-1.22	16.97	13.41	3.16	12.94	19.45
GLOUCESTER	11.28	9.17	18.15	3.89	13.23	13.68	-0.45	16.57	25.69
GREATER LAWRENCE	10.70	8.02	18.70	3.80	11.36	8.13	1.71	7.28	7.69
GREENFIELD	12.06	10.33	18.23	5.92	15.28	8.34	0.30	13.19	17.23
HAMPDEN COUNTY	11.48	8.70	18.05	2.24	15.12	11.37	2.03	13.89	20.78
HAMPSHIRE COUNTY	13.99	7.75	15.24	4.88	14.16	8.25	4.40	11.73	17.17
HAVERHILL	9.68	9.19	20.32	1.30	13.43	13.40	2.87	16.80	22.71
HINGHAM	15.64	4.78	14.23	-1.32	14.69	10.89	0.95	15.32	22.28
HOLYOKE	11.63	8.60	18.50	3.50	13.13	12.85	4.23	14.15	27.88
HULL	8.12	7.93	15.01	3.23	9.39	9.79	0.57	11.36	17.28
LAWRENCE	11.91	2.03	27.20	3.22	19.04	5.44	-2.18	12.24	23.67
LEOMINSTER	8.83	6.67	17.39	5.19	13.93	10.03	2.47	12.21	19.64
LEXINGTON	10.17	8.20	24.85	2.05	13.48	9.57	-0.91	15.67	25.47
LOWELL	8.10	7.94	16.60	1.39	11.92	7.32	3.74	14.50	20.21
LYNN	8.50	1.39	33.49	0.12	17.50	11.62	-1.95	12.20	23.66
MALDEN	9.12	2.87	36.08	0.21	20.33	11.98	-2.94	9.38	22.27
MARBLEHEAD	8.97	2.04	35.37	0.81	18.96	10.61	-3.24	7.88	21.90
MARLBOROUGH	11.34	8.54	18.05	4.21	14.08	14.11	-0.71	9.91	21.89
MASS HOUSING FINA	11.89	4.80	15.28	-1.67	16.84	13.80	-0.90	9.39	9.58
MASS PORT AUTH	10.71	7.91	20.51	4.32	19.14	11.34	3.93	18.68	22.18
MASS TURNPIKE AUT	7.86	7.81	15.38	6.88	14.03	10.78	3.15	16.90	22.68

<u>Retirement System</u>	<u>1993 Return</u>	<u>1992 Return</u>	<u>1991 Return</u>	<u>1990 Return</u>	<u>1989 Return</u>	<u>1988 Return</u>	<u>1987 Return</u>	<u>1986 Return</u>	<u>1985 Return</u>
MASS WATER RESOUR	12.10	7.00	17.42	-1.02	14.60	10.66	6.32	5.78	N/A
MAYNARD	11.55	7.68	14.80	-3.33	5.94	7.72	1.10	9.91	27.80
MEDFORD	10.09	8.47	15.31	5.07	14.70	10.00	1.41	15.12	20.35
MELROSE	12.09	7.76	17.22	3.12	16.27	10.35	2.11	16.48	21.15
METHUEN	11.51	7.44	15.52	2.43	13.21	8.16	1.87	13.51	20.03
MIDDLESEX COUNTY	13.49	7.25	22.06	1.83	16.33	11.16	2.06	14.89	22.92
MILFORD	11.59	6.12	23.20	5.77	16.95	8.05	-4.86	8.98	19.66
MILTON	16.01	4.88	15.42	-1.59	16.88	13.49	4.46	10.93	22.53
MINUTEMAN REG VO	15.91	4.89	14.70	-1.55	16.90	13.87	4.49	22.05	13.17
MONTAGUE	15.67	4.86	15.68	-1.34	16.39	13.56	4.86	9.15	13.28
NATICK	8.02	9.03	21.50	3.47	17.21	10.91	-0.09	14.56	25.80
NEEDHAM	15.90	4.78	15.32	-1.55	16.84	13.83	4.67	20.76	19.58
NEW BEDFORD	9.14	6.03	20.95	-3.36	10.07	8.04	-6.31	13.68	21.48
NEWBURYPORT	11.98	5.98	21.03	5.07	13.61	10.32	-1.62	9.18	20.08
NEWTON	15.08	8.23	22.80	-4.57	16.02	13.60	-3.83	14.33	22.46
NORFOLK COUNTY	14.55	4.82	15.08	-1.16	16.62	13.42	4.14	17.47	23.77
NORTH ADAMS	8.27	3.96	31.57	2.31	19.79	9.31	-2.33	9.84	23.80
NORTH ATTLEBORO	10.50	5.86	18.19	3.07	15.93	9.60	0.57	12.66	17.64
NORTHAMPTON	7.89	3.70	32.38	2.24	18.12	11.28	-6.82	12.44	22.07
NORTHBRIDGE	16.01	4.92	15.30	-1.51	16.99	13.50	3.78	10.34	19.33
NORWOOD	11.39	6.84	14.96	6.60	17.01	11.22	2.83	13.30	17.17
PEABODY	12.54	8.56	17.96	3.01	13.43	12.77	-0.41	15.77	23.23
PITTSFIELD	11.58	8.66	17.85	4.79	15.12	9.54	-1.81	13.05	24.07
PLYMOUTH	3.30	7.49	24.77	6.89	16.18	8.33	-2.04	15.73	28.32
PLYMOUTH COUNTY	8.04	8.92	18.49	4.08	12.83	10.46	-1.30	16.71	24.66
PRIM BOARD	16.31	4.77	14.69	-2.27	17.90	13.43	3.25	19.94	22.76
QUINCY	10.66	9.14	19.07	4.09	13.43	6.36	-4.66	13.30	18.62

<u>Retirement System</u>	<u>1993 Return</u>	<u>1992 Return</u>	<u>1991 Return</u>	<u>1990 Return</u>	<u>1989 Return</u>	<u>1988 Return</u>	<u>1987 Return</u>	<u>1986 Return</u>	<u>1985 Return</u>
READING	15.96	4.87	15.43	-1.67	16.91	11.71	-2.77	10.73	26.85
REVERE	7.81	7.42	15.65	3.71	8.79	9.26	2.40	9.66	14.44
SALEM	10.66	6.92	18.73	3.31	12.86	7.39	2.99	14.57	19.46
SAUGUS	15.80	5.00	14.94	-1.32	16.55	13.50	3.98	11.50	14.53
SHREWSBURY	11.42	4.80	15.19	-1.68	16.87	13.81	4.42	19.33	17.28
SOMERVILLE	9.76	5.91	20.13	0.94	13.07	10.79	-7.08	13.14	29.94
SOUTHBRIDGE	12.92	9.07	17.76	3.55	6.77	7.82	-2.85	16.06	23.91
SPRINGFIELD	11.46	7.25	22.90	5.76	19.93	8.54	-1.18	14.91	20.45
STATE	14.85	5.53	18.10	0.44	15.70	12.67	1.89	16.17	24.10
STATE TEACHERS	13.86	6.14	18.53	1.95	15.64	12.54	0.96	16.03	24.01
STONEHAM	8.10	7.89	17.15	3.41	16.13	8.63	2.37	16.38	23.69
SWAMPSCOTT	10.42	2.09	30.22	2.37	18.93	14.25	-3.90	10.87	27.94
TAUNTON	13.02	8.26	18.85	5.49	16.83	10.64	6.06	20.07	23.41
WAKEFIELD	15.84	4.82	15.11	-1.48	16.04	13.34	4.43	21.13	19.76
WALTHAM	11.21	8.17	21.82	4.46	20.97	7.18	1.40	16.65	22.20
WATERTOWN	10.96	6.23	18.10	0.21	13.10	12.25	1.29	12.23	19.89
WEBSTER	8.36	3.94	17.65	-0.92	5.43	7.10	3.36	13.46	19.71
WELLESLEY	18.07	8.96	25.78	2.66	17.64	12.46	3.23	17.91	22.73
WEST SPRINGFIELD	7.75	8.73	18.34	4.30	16.51	10.63	1.07	11.20	15.79
WESTFIELD	13.96	8.87	18.66	5.11	16.86	8.11	0.77	15.59	20.29
WEYMOUTH	15.69	4.69	15.48	-1.49	16.69	13.33	4.53	20.02	28.19
WINCHESTER	10.36	9.29	18.58	5.51	15.75	9.62	0.01	15.27	22.77
WINTHROP	13.52	7.87	19.91	3.41	16.58	10.05	-0.24	14.67	18.51
WOBURN	11.36	8.66	15.86	5.62	13.06	8.56	-0.50	21.69	32.44
WORCESTER	13.14	7.98	15.11	1.56	14.39	12.22	1.78	15.81	19.25
WORCESTER COUNTY	8.14	7.87	16.21	3.72	10.30	8.59	1.40	16.05	27.06

PART II:

ASSET GROWTH

As of December 31, 1994 assets of Massachusetts' Retirement Systems had a market value of \$18.151 billion. (See Figures 3 and 4.) Assets of the two state funds totalled \$11.893 billion and assets of local retirement systems totalled \$6.258 billion. State funds increased by \$135 million in 1994, however, local assets declined by \$42 million. This development is the result of several factors, the most obvious of which is the 1994 return on assets. However, in the last few years some retirement systems have adopted funding schedules which authorize annual appropriations below the level of benefits to be paid. Consequently, assets of the system are used to pay current benefits. This reduces the amounts available to offset future liabilities, results in lost investment opportunity, and in fact defunds rather than funds the system. It is not an exaggeration to state that continuation of this practice will in some systems ultimately result in a serious financial crisis.

The investment experience of 1994 when combined with funding schedules which liquidate existing assets to pay current benefits further exacerbates actuarial losses. This depletion of assets and the dependence on system assets to reduce appropriations increases pressure on the investment side. The pressure for increased rates of returns will lead to the assumption of greater risk. Higher levels of portfolio risk carry the potential for severe losses. In fact, history teaches us that such an outcome is almost inevitable if sound practice is cast aside for temporary expediency.

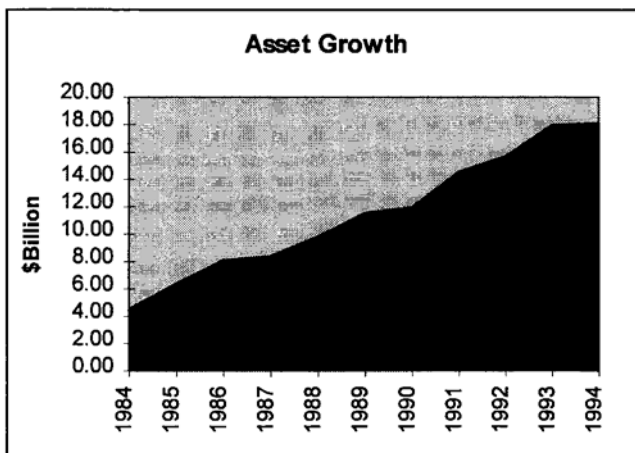


Figure 3

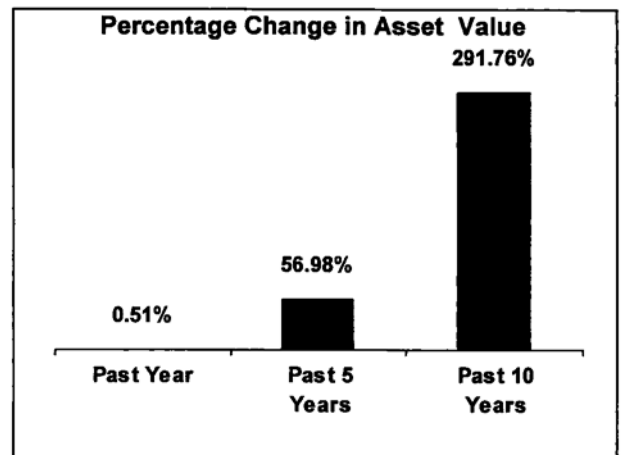


Figure 4

**Annual Report of the
Massachusetts Contributory Retirement Systems
for the year ending December 31, 1994**

Table Three

Asset Growth

Page One

Retirement System	December 31, 1994		Percent Change.....							
	Total Asset Value		Past Year		Past Five Years		Since January 1, 1985			
	Market	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
ADAMS	8,614,827.88	95	7.18	7	64.77	35	337.36	9		
AMESBURY	12,881,477.75	90	-3.62	85	48.30	74	275.28	30		
ANDOVER	24,509,550.53	64	-2.39	79	67.05	28	312.54	14		
ARLINGTON	56,965,279.26	31	-2.94	83	42.38	85	192.78	78		
ATHOL	5,716,657.11	102	-0.40	54	56.92	49	208.41	62		
ATTLEBORO	22,512,682.25	72	-2.52	80	50.93	67	229.92	54		
BARNSTABLE COUNTY	120,809,421.32	13	6.66	9	101.67	3	307.63	16		
BELMONT	25,562,052.34	62	-4.36	94	39.42	89	147.67	104		
BERKSHIRE COUNTY	32,989,345.35	51	1.83	32	84.19	9	284.75	26		
BEVERLY	27,797,541.24	59	-1.62	67	32.39	98	174.80	87		
BLUE HILLS REG VO	3,279,756.74	107	-3.91	90	29.67	103	156.73	101		
BOSTON	1,454,151,112.51	4	-1.21	64	52.33	64	243.17	42		
BRAINTREE	42,788,390.61	41	0.10	49	37.60	90	297.86	22		
BRISTOL COUNTY	94,934,163.60	17	-0.37	53	68.33	25	239.24	48		
BROCKTON	82,893,498.82	20	-2.22	74	40.93	86	164.06	96		
BROOKLINE	75,737,939.58	23	-2.38	77	55.58	53	204.45	68		
CAMBRIDGE	175,535,802.88	8	-1.77	68	62.18	40	237.97	50		
CHELSEA	21,467,671.92	74	-5.96	100	32.69	97	156.37	102		
CHICOPEE	51,524,619.86	33	-1.77	69	67.08	27	167.16	94		
CLINTON	6,959,244.76	98	0.52	45	53.85	59	178.69	85		
CONCORD	27,412,957.30	60	0.53	44	131.54	1	356.53	6		
DANVERS	33,523,272.64	50	-1.97	72	39.51	88	192.58	79		
DEDHAM	19,613,405.73	76	5.08	12	64.59	37	265.07	34		
DUKES COUNTY	10,474,482.53	93	6.85	8	112.23	2	321.64	12		
EASTHAMPTON	10,049,103.08	94	-3.67	86	59.72	44	330.29	11		
ESSEX COUNTY	85,246,462.99	19	4.68	15	82.28	11	259.68	37		
EVERETT	31,737,460.85	54	-7.04	105	31.84	99	140.55	105		

Retirement System	December 31, 1994		Percent Change.....					
	Total Asset Value	Rank	Past Year	Past Five Years	Since January 1, 1985	Past Year	Past Five Years	Since January 1, 1985
	Market	Rank	Percent	Rank	Percent	Rank	Percent	Rank
FAIRHAVEN	8,104,325.44	96	2.29	29	52.90	62	220.40	59
FALL RIVER	91,610,664.75	18	-3.72	89	54.30	58	259.40	38
FALMOUTH	22,997,276.53	70	3.16	19	83.30	10	361.78	5
FITCHBURG	33,783,750.86	49	-0.83	59	47.29	79	241.25	44
FRAMINGHAM	54,906,263.14	32	-6.87	104	64.73	36	244.69	41
FRANKLIN COUNTY	17,937,709.30	82	-2.38	78	64.89	34	238.94	49
GARDNER	13,050,094.42	88	13.88	2	47.94	76	207.83	63
GLOUCESTER	23,884,830.23	68	-1.97	73	50.62	68	227.41	55
GREATER LAWRENCE	3,688,121.39	105	-2.68	81	70.63	20	240.33	46
GREENFIELD	13,967,471.45	86	-1.88	70	77.90	14	280.11	28
HAMPDEN COUNTY	81,550,248.68	21	2.54	25	71.93	18	271.81	32
HAMPSHIRE COUNTY	51,493,722.86	34	2.45	26	79.16	12	240.28	47
HAVERHILL	60,125,326.58	29	2.92	20	72.89	17	340.51	7
HINGHAM	18,069,191.70	81	2.91	21	66.45	31	191.53	80
HOLYOKE	60,969,017.41	28	0.74	43	56.35	50	207.10	65
HULL	7,027,968.95	97	14.75	1	50.59	69	151.74	103
LAWRENCE	46,139,934.62	36	-8.37	107	30.52	102	170.06	91
LEOMINSTER	24,549,158.29	63	-0.84	60	59.34	45	262.90	35
LEXINGTON	35,000,093.55	47	0.11	48	65.50	32	249.07	40
LOWELL	65,006,598.96	25	4.94	14	49.19	72	175.42	86
LYNN	78,363,672.75	22	-8.20	106	20.29	106	205.34	67
MALDEN	39,354,522.63	44	-5.20	98	55.98	52	170.41	90
MARBLEHEAD	24,343,783.74	67	0.35	47	86.69	5	201.66	69
MARLBOROUGH	22,885,640.37	71	1.81	35	76.02	15	289.52	25
MASS HOUSING FINA	18,661,104.70	79	2.69	22	69.70	23	309.08	15
MASS PORT AUTH	133,210,781.19	12	0.47	46	70.22	22	300.10	21
MASS TURNPIKE AUT	97,691,623.55	16	-0.60	55	52.48	63	296.58	23

Retirement System	December 31, 1994		Percent Change.....					
	Total Asset Value	Rank	Past Year	Past Five Years	Since January 1, 1985			
	Market	Rank	Percent	Rank	Percent	Rank	Percent	Rank
MASS WATER RESOUR	32,631,568.70	52	12.27	3	N/A	N/A	N/A	N/A
MAYNARD	6,011,411.32	100	-2.27	75	49.80	71	169.02	92
MEDFORD	49,777,728.46	35	-1.39	65	53.49	61	226.79	56
MELROSE	21,879,891.11	73	4.13	16	33.05	96	161.36	98
METHUEN	28,741,186.10	58	-0.22	51	71.03	19	334.21	10
MIDDLESEX COUNTY	306,877,035.82	5	1.82	33	74.11	16	281.27	27
MILFORD	18,837,909.89	78	3.95	17	88.78	4	305.31	20
MILTON	24,393,486.94	66	-0.63	56	47.36	78	208.97	61
MINUTEMAN REG VO	3,430,517.95	106	2.39	27	68.86	24	535.22	2
MONTAGUE	5,234,439.09	103	3.70	18	58.16	47	223.89	57
NATICK	31,926,521.36	53	-2.29	76	43.44	84	232.12	52
NEEDHAM	39,892,508.88	43	-3.96	91	36.43	91	296.19	24
NEW BEDFORD	75,711,666.69	24	2.69	23	48.32	73	182.44	84
NEWBURYPORT	12,921,242.82	89	-0.91	62	66.54	30	278.34	29
NEWTON	116,492,898.05	14	-4.79	97	29.44	104	121.36	106
NORFOLK COUNTY	179,224,269.18	7	1.71	36	60.88	42	251.49	39
NORTH ADAMS	13,651,961.38	87	-6.84	103	55.19	55	241.10	45
NORTH ATTLEBORO	16,945,623.89	84	5.88	11	66.96	29	305.62	19
NORTHAMPTON	17,611,081.48	83	-1.07	63	62.79	39	197.01	73
NORTHBRIDGE	4,488,447.91	104	2.31	28	45.36	82	162.66	97
NORWOOD	45,771,706.63	38	-3.67	87	53.51	60	274.14	31
PEABODY	45,789,722.71	37	-3.68	88	45.61	81	223.10	58
PITTSFIELD	41,764,726.20	42	-5.94	99	51.70	65	170.87	88
PLYMOUTH	34,705,274.27	48	4.99	13	78.32	13	306.20	17
PLYMOUTH COUNTY	180,538,262.09	6	7.61	6	86.10	6	319.17	13
PRIM BOARD	4,929,366,069.00	3	9.27	5	70.40	21	896.23	1
QUINCY	114,768,120.45	15	0.78	42	62.94	38	206.88	66

<u>Retirement System</u>	<u>December 31, 1994</u> <u>Total Asset Value</u>		<u>Percent Change.....</u>					
	<u>Market</u>	<u>Rank</u>	<u>Past Year</u>		<u>Past Five Years</u>		<u>Since January 1, 1985</u>	
			<u>Percent</u>	<u>Rank</u>	<u>Percent</u>	<u>Rank</u>	<u>Percent</u>	<u>Rank</u>
READING	23,420,599.77	69	2.02	31	55.14	56	231.76	53
REVERE	31,577,491.54	55	-4.55	95	34.49	94	183.59	83
SALEM	38,131,242.54	45	-1.49	66	36.35	92	196.56	74
SAUGUS	15,139,154.33	85	1.20	39	30.62	101	184.57	82
SHREWSBURY	18,568,064.43	80	2.58	24	48.29	75	242.02	43
SOMERVILLE	59,419,948.39	30	-4.24	92	34.37	95	188.59	81
SOUTHBRIDGE	6,845,915.69	99	9.66	4	85.35	7	158.01	99
SPRINGFIELD	148,981,182.60	10	-2.81	82	50.39	70	193.86	77
STATE	5,879,193,958.74	2	1.34	38	57.17	48	385.20	4
STATE TEACHERS	6,014,074,556.85	1	0.97	41	58.34	46	305.68	18
STONEHAM	19,898,848.15	75	-0.85	61	40.79	87	207.76	64
SWAMPSCOTT	11,567,569.94	91	-6.42	102	51.40	66	215.83	60
TAUNTON	43,884,754.39	39	-1.91	71	54.35	57	268.66	33
WAKEFIELD	24,437,850.96	65	1.36	37	43.65	83	194.69	75
WALTHAM	61,591,131.18	27	-6.00	101	31.26	100	199.70	70
WATERTOWN	31,333,719.56	56	-0.69	57	35.15	93	198.85	72
WEBSTER	5,892,515.42	101	6.07	10	59.97	43	170.53	89
WELLESLEY	61,603,854.95	26	-4.64	96	60.90	41	465.03	3
WEST SPRINGFIELD	19,301,255.17	77	1.10	40	65.48	33	156.93	100
WESTFIELD	43,326,013.07	40	-0.05	50	84.59	8	338.55	8
WEYMOUTH	37,549,810.36	46	1.82	34	56.28	51	194.48	76
WINCHESTER	25,886,134.35	61	-0.78	58	55.32	54	261.47	36
WINTHROP	10,826,658.80	92	2.24	30	47.64	77	168.92	93
WOBURN	30,516,436.24	57	-0.27	52	67.40	26	236.60	51
WORCESTER	168,258,157.50	9	-4.35	93	26.87	105	165.90	95
WORCESTER COUNTY	136,460,794.44	11	-3.33	84	46.52	80	198.98	71
MASS. RETIREMENT SYSTEMS	18,151,767,908.20		0.51		56.98		297.16	

PART III:

FEES AND TURNOVER

This part of the report focuses attention on the expenses involved in the activity of the boards. The responsibility for day to day management of the portfolio is delegated to professional money managers. PERA requires that such managers meet strict standards. In addition, custody costs and consultant fees are incurred in the normal course of investing by retirement boards. These costs may be paid from investment earnings or paid from appropriations. The return of those systems paying expenses from earnings is reduced by such costs. However, nationwide and in Massachusetts the use of investment earnings is the most common method of paying for these costs. Table Four contains the gross returns of the retirement systems and the net returns of the retirement systems after expenses have been paid from earnings. Following the gross and net returns are the amounts paid for management advice, custodial costs and consultant fees. In evaluating these costs, PERA is seeking to make systems aware of the impact of expenses on real returns. Boards should keep this in mind when negotiating contracts with various vendors.

The same is true in analyzing the turnover in a portfolio. Turnover rates must be judged based on the performance of the portfolio. High turnover rates increase trading costs, consequently, a high level of buying and selling must be justified by performance. As a general principle, such turnover does not enhance performance, however, each manager must be assessed on his or her performance. Table Five contains turnover rates of the stock and bond portfolios of the retirement systems.

Please note:

- The administrative expenses of the PRIT Fund have been categorized as management fees.
- The Investment Committee of the State Treasurer administers the MASTERS Trust for the State Employees' and Teachers' Retirement Systems. The gross return as reported by the Office of the Treasurer was $-.64\%$ and the net return $-.82\%$, a difference of 18 basis points. These returns differ from those reported for the State Employees' and Teachers' Retirement Systems because they exclude the funds invested by these retirement systems with the PRIT Fund. In addition, the MASTERS Trust pays for administrative and other operating expenses from earnings which is reflected in a lower net return for the State Employees' and Teachers' Retirement Systems than if they had not been paid from earnings.

- The administrative expenses and other operating expenses of the MASTERS Trust have been categorized as management fees for the State Employees' and Teachers' Retirement Systems.
- Management fees for those retirement systems which use BayBank and U.S. Trust as manager and custodian include custody fees.
- Information regarding expenses was derived from the records of the retirement systems, the PRIT Fund and the Office of the Treasurer.
- With respect to systems investing in shares of mutual funds, limited partnerships, group trusts, etc., the turnover data reflects the purchase and redemption of units and does not reflect the buying and selling of stocks and bonds within these funds.

Statewide in 1994, the gross return was $-.55\%$ and the net return $-.88\%$, a difference of 33 basis points. Statewide, \$52,594,178 was paid in management fees, \$4,154,458 was paid in custody fees, and \$2,024,045 was paid in consulting fees.

**Annual Report of the
Massachusetts Contributory Retirement Systems
for the year ending December 31, 1994**

Table Four

Gross and Net Performance / Management, Custodian Bank and Consultant Fees

Page One

<u>Retirement System</u>	<u>..... Gross and Net Performance</u>			<u>.....Management, Custodian Bank and Consultant Fees</u>			
	<u>Gross</u>	<u>Net</u>	<u>Basis Point Difference</u>	<u>Management Fees</u>	<u>Custodian Bank Fees</u>	<u>Consultant Fees</u>	<u>As a % of Market Value</u>
ADAMS	-0.46	-0.78	32	25,993.00	9,404.05	0.00	0.41
AMESBURY	-1.53	-1.77	24	32,451.90	11,104.50	10,102.52	0.42
ANDOVER	-5.21	-5.53	32	81,775.97	12,369.00	0.00	0.38
ARLINGTON	-0.83	-1.01	18	47,477.28	23,974.14	30,385.57	0.18
ATHOL	-2.10	-2.42	32	18,719.57	7,780.96	0.00	0.46
ATTLEBORO	-3.04	-3.25	21	48,251.56	0.00	0.00	0.21
BARNSTABLE COUNTY	-1.07	-1.51	44	512,408.42	23,885.00	15,792.00	0.46
BELMONT	-1.36	-1.89	53	136,956.94	23,564.23	12,036.19	0.68
BERKSHIRE COUNTY	-1.04	-1.37	33	89,753.74	19,472.25	85.61	0.33
BEVERLY	-1.50	-2.15	65	135,349.38	25,774.04	21,000.00	0.66
BLUE HILLS REG VO	-2.50	-3.09	59	19,727.29	0.00	0.00	0.60
BOSTON	0.75	0.41	34	4,062,766.70	830,767.11	54,350.00	0.34
BRAINTREE	-0.61	-1.01	40	171,335.60	36,266.40	0.00	0.49
BRISTOL COUNTY	-3.14	-3.35	21	211,642.26	0.00	0.00	0.22
BROCKTON	-1.81	-2.33	52	441,075.90	76,196.61	50,000.00	0.68
BROOKLINE	-1.75	-2.17	42	247,771.55	48,966.10	16,041.87	0.41
CAMBRIDGE	-1.05	-1.60	55	975,810.43	0.00	0.00	0.56
CHELSEA	-4.09	-4.40	31	68,919.89	0.00	0.00	0.32
CHICOPEE	-2.02	-2.44	42	212,095.59	36,547.57	0.00	0.48
CLINTON	-0.67	-2.21	154	101,578.78	0.00	0.00	1.46
CONCORD	-1.18	-1.52	34	91,631.27	12,596.17	288.21	0.38
DANVERS	-1.95	-1.95	0	84,352.30	10,290.00	0.00	0.28
DEDHAM	0.54	0.11	43	77,176.49	2,303.63	1,931.46	0.42
DUKES COUNTY	-1.13	-1.16	3	26,401.92	0.00	0.00	0.25
EASTHAMPTON	-2.34	-2.82	48	50,000.00	0.00	0.00	0.50
ESSEX COUNTY	-0.46	-0.87	41	302,883.00	42,519.98	9,925.00	0.42
EVERETT	-3.43	-3.67	24	76,450.46	0.00	0.00	0.24

Retirement System Gross and Net PerformanceManagement, Custodian Bank and Consultant Fees			
	Gross	Net	Basis Point Difference	Management Fees	Custodian Bank Fees	Consultant Fees	As a % of Market Value
FAIRHAVEN	0.82	0.39	43	30,757.11	918.06	769.75	0.40
FALL RIVER	-3.63	-3.81	18	173,039.35	0.00	0.00	0.19
FALMOUTH	1.14	0.84	30	69,169.98	0.00	0.00	0.30
FITCHBURG	-1.54	-1.54	0	64,068.75	0.00	0.00	0.19
FRAMINGHAM	-3.04	-3.41	37	210,227.56	1,613.44	1,352.78	0.39
FRANKLIN COUNTY	-1.49	-1.49	0	0.00	0.00	0.00	0.00
GARDNER	0.66	0.22	44	49,370.57	1,473.65	1,235.58	0.40
GLOUCESTER	-0.65	-1.01	36	69,590.00	16,040.73	4,167.00	0.38
GREATER LAWRENCE	-3.01	-3.01	0	22,166.59	0.00	0.00	0.60
GREENFIELD	-3.41	-3.43	2	60,784.72	10,688.16	10,120.52	0.58
HAMPDEN COUNTY	-0.73	-1.11	38	290,881.68	19,375.00	1,875.00	0.38
HAMPSHIRE COUNTY	0.19	-0.42	61	281,204.90	16,307.35	19,507.55	0.62
HAVERHILL	-0.29	-1.00	71	342,093.50	46,084.84	36,720.50	0.71
HINGHAM	0.64	0.21	43	71,647.57	2,138.60	1,793.09	0.42
HOLYOKE	-0.71	-1.03	32	195,423.00	18,159.84	0.00	0.35
HULL	0.19	-0.27	46	29,845.59	1,380.00	0.00	0.44
LAWRENCE	-6.17	-6.56	39	188,007.00	11,691.35	0.00	0.43
LEOMINSTER	-2.80	-2.80	0	35,000.00	13,625.00	0.00	0.20
LEXINGTON	-0.66	-0.97	31	92,336.79	15,500.00	0.00	0.31
LOWELL	3.72	3.22	50	226,482.98	46,453.87	33,826.45	0.47
LYNN	-6.05	-6.34	29	229,739.64	20,441.94	0.00	0.32
MALDEN	-4.78	-5.04	26	111,652.00	7,293.94	0.00	0.30
MARBLEHEAD	-0.19	-0.62	43	95,244.03	5,376.24	2,229.62	0.42
MARLBOROUGH	-0.14	-0.61	47	94,476.62	12,819.73	12,000.00	0.52
MASS HOUSING FINA	-2.11	-2.43	32	59,160.23	19,766.61	0.00	0.42
MASS PORT AUTH	-1.32	-1.36	4	47,652.43	39,244.31	0.00	0.07
MASS TURNPIKE AUT	-0.81	-1.01	20	121,046.50	34,175.52	42,250.00	0.20

Retirement System Gross and Net PerformanceManagement, Custodian Bank and Consultant Fees			
	Gross	Net	Basis Point Difference	Management Fees	Custodian Bank Fees	Consultant Fees	As a % of Market Value
MASS WATER RESOUR	-3.37	-3.88	51	159,477.58	61.96	51.95	0.49
MAYNARD	-3.67	-4.09	42	25,669.41	0.00	0.00	0.43
MEDFORD	-0.63	-1.11	48	170,601.59	30,527.11	39,258.51	0.48
MELROSE	-0.68	-0.97	29	59,880.37	5,051.37	0.00	0.30
METHUEN	-2.15	-2.15	0	89,437.00	15,584.40	0.00	0.37
MIDDLESEX COUNTY	0.38	-0.16	54	1,374,698.32	156,996.38	97,500.00	0.53
MILFORD	-2.08	-2.08	0	41,901.39	0.00	0.00	0.22
MILTON	0.84	0.41	43	95,573.81	2,852.77	2,391.89	0.41
MINUTEMAN REG VO	0.66	0.22	44	13,249.25	395.47	331.58	0.41
MONTAGUE	0.78	0.35	43	19,529.58	582.94	488.76	0.39
NATICK	-0.49	-0.75	26	68,720.89	19,241.99	0.00	0.28
NEEDHAM	0.95	0.52	43	163,912.65	4,892.60	4,102.17	0.43
NEW BEDFORD	-1.61	-2.07	46	311,583.77	624.92	15,523.96	0.43
NEWBURYPORT	-2.12	-2.44	32	35,091.01	9,578.41	0.00	0.35
NEWTON	-1.46	-1.97	51	522,145.48	58,171.59	29,711.42	0.52
NORFOLK COUNTY	-0.71	-1.11	40	578,031.17	46,803.37	79,299.94	0.39
NORTH ADAMS	-4.94	-5.42	48	62,343.00	7,577.98	0.00	0.51
NORTH ATTLEBORO	2.60	2.40	20	31,183.04	11,145.91	9,589.38	0.31
NORTHAMPTON	-4.69	-5.08	39	57,548.00	13,466.99	0.00	0.40
NORTHBRIDGE	0.43	-0.02	45	17,839.70	532.49	446.47	0.42
NORWOOD	-0.73	-0.97	24	55,560.53	11,500.00	44,750.00	0.24
PEABODY	-0.21	-0.60	39	153,457.00	23,409.39	0.00	0.39
PITTSFIELD	-0.36	-0.79	43	166,377.00	16,250.00	0.00	0.44
PLYMOUTH	1.56	1.24	32	57,814.56	33,683.99	24,375.00	0.33
PLYMOUTH COUNTY	5.17	5.05	12	195,207.00	28,147.04	12,500.00	0.13
PRIM BOARD	0.41	-0.02	43	19,283,556.00	575,592.00	482,600.00	0.41
QUINCY	-1.29	-1.58	29	324,155.25	33,879.06	138.64	0.31

Retirement System Gross and Net PerformanceManagement, Custodian Bank and Consultant Fees			
	Gross	Net	Basis Point Difference	Management Fees	Custodian Bank Fees	Consultant Fees	As a % of Market Value
READING	0.54	0.10	44	90,679.32	2,706.67	2,269.39	0.41
REVERE	-2.08	-2.26	18	139,570.68	36,685.97	541.37	0.56
SALEM	-0.57	-1.13	56	178,491.14	29,223.42	10,000.00	0.57
SAUGUS	0.72	0.29	43	59,559.19	1,777.77	1,490.56	0.42
SHREWSBURY	-1.68	-2.46	78	88,866.24	39,848.18	15,526.35	0.78
SOMERVILLE	-1.14	-1.54	40	209,547.06	52,527.47	0.00	0.44
SOUTHBRIDGE	0.45	0.07	38	22,308.00	6,512.89	2,500.00	0.46
SPRINGFIELD	-1.50	-1.80	30	242,687.74	182,490.88	27,500.00	0.30
STATE	-0.30	-0.60	30	16,309,053.07	659,311.40	487,551.63	0.30
STATE TEACHERS	-0.17	-0.47	30	16,152,940.63	737,357.19	493,974.14	0.29
STONEHAM	-1.21	-1.68	47	94,854.11	15,303.40	12,103.63	0.61
SWAMPSCOTT	-4.79	-4.90	11	0.00	7,342.33	18,351.00	0.22
TAUNTON	-1.18	-1.71	53	214,894.00	4,368.29	17,000.00	0.54
WAKEFIELD	0.66	0.21	45	97,257.26	2,903.02	2,434.02	0.42
WALTHAM	-2.92	-2.92	0	129,394.95	0.00	0.00	0.21
WATERTOWN	0.88	0.46	42	119,067.18	30,536.81	12,375.00	0.52
WEBSTER	2.05	0.84	121	70,358.84	0.00	0.00	1.19
WELLESLEY	-2.42	-2.90	48	244,870.56	43,599.50	48,860.00	0.55
WEST SPRINGFIELD	-1.61	-1.81	20	39,071.34	15,771.00	0.00	0.28
WESTFIELD	-2.36	-3.00	64	275,508.00	30,596.31	0.00	0.71
WEYMOUTH	1.13	0.70	43	146,836.09	4,382.89	3,674.81	0.41
WINCHESTER	-0.53	-0.86	33	67,148.31	17,109.90	0.00	0.33
WINTHROP	1.14	1.07	7	6,761.80	44,246.61	0.00	0.47
WOBURN	-2.63	-2.63	0	0.00	0.00	0.00	0.00
WORCESTER	-1.34	-1.86	52	834,880.90	0.00	91,398.05	0.55
WORCESTER COUNTY	-2.34	-2.60	26	296,757.10	44,548.29	26,250.00	0.27

**Annual Report of the
Massachusetts Contributory Retirement Systems
for the year ending December 31, 1994**

Table Five

Portfolio Turnover

Page One

Retirement System	Equity Turnover				Fixed Income Turnover			
	Total Purchases	% of Avg. Market Value	Total Sales	% of Avg. Market Value	Total Purchases	% of Beg. Market Value	Total Sales	% of Beg. Market Value
ADAMS	2,849,488.50	90.77	3,028,063.30	96.46	1,745,093.03	43.96	1,078,181.05	27.16
AMESBURY	1,460,875.00	29.68	3,382,616.25	68.72	11,863,610.50	208.52	8,866,773.63	155.85
ANDOVER	14,086,075.03	175.20	15,004,469.25	186.62	28,615,132.34	221.34	26,540,747.29	205.30
ARLINGTON	31,280,685.14	106.41	28,280,685.14	96.20	9,736,354.75	33.71	11,050,839.09	38.26
ATHOL	897,175.56	67.14	830,831.02	62.18	1,712,133.74	46.73	981,313.23	26.78
ATTLEBORO	5,642,813.64	66.70	5,667,156.82	66.99	11,753,089.67	89.53	11,533,390.96	87.86
BARNSTABLE COUNTY	26,202,304.66	48.83	17,331,468.69	32.30	70,897,654.66	157.60	58,824,108.24	130.76
BELMONT	2,727,174.27	16.77	2,868,780.55	17.65	8,182,350.32	90.33	7,084,897.69	78.21
BERKSHIRE COUNTY	12,598,447.56	126.15	8,258,342.74	82.69	10,718,304.63	48.58	12,876,554.09	58.36
BEVERLY	11,387,176.24	68.23	8,883,917.60	53.23	5,376,084.69	45.94	7,808,308.69	66.72
BLUE HILLS REG VO	327,549.25	24.98	230,995.62	17.62	835,225.06	43.52	843,533.27	43.95
BOSTON	564,555,085.28	62.58	539,798,644.74	59.83	823,607,147.17	205.81	837,038,923.13	209.17
BRAINTREE	10,006,090.26	99.96	5,554,162.29	55.48	17,515,840.53	67.80	16,839,239.27	65.18
BRISTOL COUNTY	35,459,623.02	114.29	23,335,976.97	75.22	74,589,774.41	110.98	79,990,199.67	119.01
BROCKTON	47,575,466.59	102.75	48,177,514.79	104.05	16,554,050.56	49.76	14,389,390.18	43.25
BROOKLINE	27,986,905.11	87.21	27,424,131.82	85.45	48,228,878.20	135.00	42,186,554.74	118.08
CAMBRIDGE	60,809,211.28	56.51	56,590,698.75	52.59	37,899,340.25	65.43	36,919,101.12	63.73
CHELSEA	9,633,877.89	95.76	7,773,618.49	77.27	9,794,719.09	77.88	11,521,275.94	91.61
CHICOPEE	8,074,210.38	32.67	10,057,484.55	40.69	11,991,050.86	60.79	7,242,912.27	36.72
CLINTON	7,054,138.13	104.56	6,693,750.03	99.22	0.00	0.00	0.00	0.00
CONCORD	838,961.47	7.87	167,003.82	1.57	1,686,422.26	11.15	740,893.24	4.90
DANVERS	1,859,321.75	14.44	6,914,327.89	53.71	27,526,121.29	156.99	21,117,951.63	120.44
DEDHAM	816,152.55	4.31	0.00	0.00	0.00	0.00	0.00	0.00
DUKES COUNTY	2,557,466.66	76.38	2,493,856.07	74.48	5,548,248.03	87.15	4,910,160.07	77.13
EASTHAMPTON	105,572.00	5.61	263,669.97	14.02	1,147,710.94	14.15	795,771.53	9.81
ESSEX COUNTY	35,781,856.36	92.98	28,224,664.89	73.34	18,521,866.23	57.64	15,747,124.34	49.01
EVERETT	13,066,975.97	82.46	12,960,257.32	81.79	15,700,213.77	90.50	17,975,732.81	103.61

<u>Retirement System</u>	<u>..... Equity Turnover</u>				<u>..... Fixed Income Turnover</u>			
	<u>Total</u>	<u>% of Avg.</u>	<u>Total</u>	<u>% of Avg.</u>	<u>Total</u>	<u>% of Beg.</u>	<u>Total</u>	<u>% of Beg.</u>
	<u>Purchases</u>	<u>Market Value</u>	<u>Sales</u>	<u>Market Value</u>	<u>Purchases</u>	<u>Market Value</u>	<u>Sales</u>	<u>Market Value</u>
FAIRHAVEN	812,283.05	10.88	717,156.15	9.61	0.00	0.00	0.00	0.00
FALL RIVER	35,876,113.87	100.80	29,424,210.35	82.67	63,694,394.35	105.09	68,228,979.33	112.57
FALMOUTH	760,139.99	5.28	231,432.26	1.61	2,535,863.82	33.07	1,758,633.94	22.93
FITCHBURG	7,241,740.36	60.76	7,286,185.09	61.13	6,057,986.52	40.29	2,167,239.30	14.41
FRAMINGHAM	5,061,656.06	8.90	6,076,696.12	10.69	0.00	0.00	2,845.69	37.74
FRANKLIN COUNTY	5,500,622.77	73.70	6,022,673.48	80.70	4,818,901.18	50.16	3,714,136.87	38.66
GARDNER	1,202,518.98	10.46	1,093,671.92	9.51	0.00	0.00	0.00	0.00
GLOUCESTER	9,769,727.43	83.78	10,511,776.01	90.14	4,784,577.25	41.23	3,591,814.64	30.95
GREATER LAWRENCE	396,330.47	24.71	639,592.72	39.88	324,082.13	17.64	200,950.76	10.94
GREENFIELD	3,170,855.29	59.76	3,259,813.91	61.43	9,972,349.77	144.99	8,958,522.63	130.25
HAMPDEN COUNTY	36,219,696.83	95.69	34,617,817.23	91.45	17,674,675.72	47.51	14,205,728.89	38.18
HAMPSHIRE COUNTY	2,982,370.18	10.46	3,023,598.89	10.60	4,076,426.89	21.66	3,110,734.57	16.53
HAVERHILL	37,820,913.55	98.15	33,242,620.74	86.26	24,169,387.31	169.39	19,992,662.20	140.12
HINGHAM	460,161.15	2.63	0.00	0.00	0.00	0.00	0.00	0.00
HOLYOKE	34,028,052.73	120.84	36,764,110.02	130.55	15,178,771.07	52.55	11,184,914.99	38.72
HULL	2,348,823.25	177.62	2,026,782.83	153.27	1,579,355.87	33.79	1,423,345.38	30.45
LAWRENCE	29,029,648.70	137.07	21,738,027.91	102.64	144,971,142.59	478.92	151,093,891.53	499.15
LEOMINSTER	4,997,386.49	59.22	4,616,781.64	54.71	3,570,447.38	29.20	1,459,324.50	11.94
LEXINGTON	19,799,071.70	98.57	19,959,705.52	99.37	9,707,205.24	75.47	6,732,631.31	52.34
LOWELL	47,864,345.53	135.21	35,085,953.47	99.11	10,616,666.18	40.99	21,826,816.36	84.26
LYNN	14,570,025.86	30.19	20,970,426.43	43.45	24,387,290.81	80.47	18,892,445.92	62.34
MALDEN	9,609,453.64	42.72	11,094,809.15	49.32	11,701,319.51	69.95	9,987,225.07	59.70
MARBLEHEAD	28,121,840.48	150.61	15,806,595.32	84.65	0.00	0.00	9,067,788.46	101.78
MARLBOROUGH	7,710,091.04	92.39	6,511,052.42	78.02	4,657,827.71	32.35	5,180,079.00	35.97
MASS HOUSING FINA	6,798,849.04	108.13	7,025,628.48	111.73	12,509,303.82	124.81	10,443,062.92	104.19
MASS PORT AUTH	18,029,840.80	29.26	19,015,399.45	30.86	38,639,132.09	62.07	32,036,963.15	51.46
MASS TURNPIKE AUT	12,359,436.96	105.11	10,978,164.63	93.37	100,456,147.36	159.79	78,249,679.31	124.47

Table Five

Portfolio Turnover

Page Three

Retirement System	Equity Turnover				Fixed Income Turnover			
	Total Purchases	% of Avg. Market Value	Total Sales	% of Avg. Market Value	Total Purchases	% of Beg. Market Value	Total Sales	% of Beg. Market Value
MASS WATER RESOUR	3,924,521.02	28.14	4,452,389.36	31.92	26,667,401.10	321.18	21,959,100.15	264.48
MAYNARD	2,004,011.52	100.58	1,727,135.44	86.68	3,697,575.12	93.94	3,766,878.75	95.70
MEDFORD	11,960,430.24	61.35	8,909,104.83	45.70	4,846,745.75	18.11	6,070,329.42	22.68
MELROSE	3,216,907.14	35.42	2,716,920.35	29.91	2,316,455.76	23.88	1,722,830.73	17.76
METHUEN	2,858,602.60	23.51	2,526,898.73	20.78	5,118,335.76	35.53	3,960,252.88	27.49
MIDDLESEX COUNTY	99,815,120.81	55.23	73,036,811.20	40.42	67,074,498.08	58.49	75,956,723.38	66.23
MILFORD	5,029,527.90	77.30	5,020,536.39	77.16	11,113,922.52	104.91	10,543,481.35	99.52
MILTON	1,766,253.84	7.26	1,988,481.30	8.17	0.00	0.00	0.00	0.00
MINUTEMAN REG VO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MONTAGUE	634,391.51	13.58	468,898.52	10.04	0.00	0.00	0.00	0.00
NATICK	4,763,442.74	15.76	6,272,656.05	20.75	1,922,500.00	0.00	0.00	0.00
NEEDHAM	1,877,425.07	4.71	3,032,363.04	7.60	0.00	0.00	0.00	0.00
NEW BEDFORD	18,473,693.20	66.07	15,065,725.53	53.88	61,371,589.93	138.30	65,891,672.08	148.49
NEWBURYPORT	770,268.00	17.03	3,274,137.84	72.39	12,806,120.91	191.89	9,545,623.03	143.03
NEWTON	76,933,837.26	110.89	77,351,867.35	111.50	16,652,745.78	38.40	17,398,896.74	40.12
NORFOLK COUNTY	42,312,154.08	35.26	38,694,750.96	32.25	55,876,312.34	239.78	32,887,891.10	141.13
NORTH ADAMS	3,348,521.13	43.92	3,600,617.49	47.22	3,713,581.19	59.57	3,420,449.74	54.87
NORTH ATTLEBORO	515,357.88	7.22	428,607.74	6.00	3,752,292.19	46.61	3,410,603.53	42.37
NORTHAMPTON	3,240,296.37	35.46	3,868,056.90	42.33	6,262,649.07	82.40	4,221,565.47	55.55
NORTHBRIDGE	457,892.69	10.34	387,510.47	8.75	0.00	0.00	0.00	0.00
NORWOOD	12,210,239.00	59.49	8,705,107.86	42.41	3,824,883.43	14.09	9,359,970.81	34.49
PEABODY	24,664,312.09	116.28	25,879,944.23	122.01	8,130,352.18	35.81	6,865,299.54	30.24
PITTSFIELD	12,174,822.64	79.61	13,077,376.12	85.51	9,867,133.91	38.81	8,812,478.84	34.66
PLYMOUTH	3,870,287.50	19.30	5,912,576.69	29.48	3,796,984.38	35.94	4,416,437.06	41.80
PLYMOUTH COUNTY	34,487,046.37	43.49	6,720,647.66	8.48	19,846,995.00	44.44	6,962,181.31	15.59
PRIM BOARD	2,957,943,478.86	91.71	1,615,621,704.67	50.09	2,238,935,917.95	202.93	1,808,186,465.82	163.89
QUINCY	72,350,725.48	123.23	71,992,842.91	122.62	243,454,982.11	533.02	254,456,788.22	557.11

<u>Retirement System</u>	<u>Equity Turnover</u>				<u>Fixed Income Turnover</u>			
	<u>Total</u> <u>Purchases</u>	<u>% of Avg.</u> <u>Market Value</u>	<u>Total</u> <u>Sales</u>	<u>% of Avg.</u> <u>Market Value</u>	<u>Total</u> <u>Purchases</u>	<u>% of Beg.</u> <u>Market Value</u>	<u>Total</u> <u>Sales</u>	<u>% of Beg.</u> <u>Market Value</u>
READING	1,854,136.62	8.33	1,399,577.35	6.29	0.00	0.00	0.00	0.00
REVERE	33,197,055.45	165.28	13,659,534.88	68.01	5,182,450.65	28.61	22,168,300.53	122.39
SALEM	19,296,587.33	126.57	16,384,316.22	107.47	10,606,922.47	49.65	11,047,986.78	51.71
SAUGUS	621,036.89	4.33	1,493,225.45	10.40	0.00	0.00	0.00	0.00
SHREWSBURY	8,426,446.60	117.26	6,814,211.03	94.82	5,061,123.19	48.27	5,278,573.33	50.34
SOMERVILLE	23,076,460.64	69.26	19,975,348.31	59.95	20,436,964.40	106.48	20,134,696.75	104.90
SOUTHBRIDGE	2,203,883.99	80.88	2,751,249.83	100.97	1,067,054.03	36.15	1,128,651.60	38.24
SPRINGFIELD	36,390,601.86	63.66	42,971,468.84	75.17	78,560,815.23	92.81	70,423,559.68	83.19
STATE	5,152,068,049.33	88.63	4,572,570,568.67	78.66	0.00	0.00	0.00	0.00
STATE TEACHERS	5,650,008,478.88	94.71	5,155,469,818.70	86.42	0.00	0.00	0.00	0.00
STONEHAM	5,284,123.40	69.36	4,437,364.21	58.24	12,262,119.56	100.74	12,114,756.84	99.53
SWAMPSCOTT	2,444,459.18	43.59	2,220,162.65	39.59	3,890,948.45	67.39	4,040,966.07	69.98
TAUNTON	15,358,075.59	60.79	11,701,877.76	46.32	9,253,792.20	49.09	11,744,436.10	62.31
WAKEFIELD	2,285,119.63	9.48	1,753,250.11	7.27	0.00	0.00	0.00	0.00
WALTHAM	17,386,492.47	58.68	18,778,572.59	63.38	33,510,264.18	99.41	33,470,601.00	99.30
WATERTOWN	15,129,748.42	100.40	14,958,392.21	99.26	15,393,021.69	103.27	14,876,306.21	99.80
WEBSTER	2,756,190.50	78.75	4,180,386.28	119.44	2,736,403.38	N/A	4,362.49	30.33
WELLESLEY	33,115,434.83	82.60	31,135,155.65	77.66	20,735,886.15	107.65	19,155,081.36	99.44
WEST SPRINGFIELD	4,818,630.30	69.98	6,095,682.53	88.53	2,494,817.52	22.11	1,000,223.19	8.86
WESTFIELD	17,733,575.12	72.80	18,750,091.54	76.98	13,767,897.51	96.02	11,537,088.59	80.47
WEYMOUTH	3,121,383.92	8.77	2,384,610.04	6.70	0.00	0.00	0.00	0.00
WINCHESTER	8,955,809.05	87.46	9,217,410.34	90.01	5,310,031.31	37.89	4,674,182.72	33.35
WINTHROP	1,197,820.85	22.36	1,193,308.33	22.28	1,081,296.00	31.22	65,166.88	1.88
WOBURN	2,636,339.10	31.73	2,029,062.10	24.42	8,595,237.25	41.05	6,805,783.40	32.51
WORCESTER	45,558,642.74	44.78	44,906,412.71	44.14	33,133,265.85	50.69	30,227,644.93	46.25
WORCESTER COUNTY	54,249,043.12	86.30	39,388,851.43	62.66	49,010,636.52	67.35	60,566,796.75	83.23

PART IV:

INVESTMENT COUNSELORS, CONSULTANTS, AND CUSTODIAN BANKS

Chapter 32 and traditional trust law establishes a fiduciary duty for Board members and other parties involved in the management of our retirement systems. In the area of investment activity and in particular vendor selection, that duty sets certain standards which these individuals must meet. One of the most obvious of these standards relates to decision makers having some interest in the success or failure of a vendor seeking to do business with the Board. Fiduciaries must be disinterested and must act only with the members and beneficiaries in mind.

In many respects compliance with fiduciary duty is simply a matter of common sense. In the context of vendor selection it is also important that any individual or firm assisting the Board avoid conflict of interest. Furthermore after a vendor is selected it must act only in the interest of the Board. For all these reasons common sense dictates that parties involved in or potentially involved in providing services to Boards disclose any circumstances which might give rise to such conflicts. Clearly a request for such a disclosure by the Board is the minimum required of a fiduciary. This is particularly the case in a jurisdiction that has been recently rocked by scandal resulting from the type of conflict such disclosure would uncover.

The information that follows lists those firms which provide management, consulting and custodian services to Boards. This information was taken from records on file at PERA.

The selection and evaluation of competing firms has had an increasing impact on the investment performance of the retirement systems. This is particularly true as Boards now rely on consultants to assist in the development of asset allocation strategy as well as managers to carry out that strategy. Thus the duty to act prudently in the selection and monitoring of vendors becomes a determining factor in the results achieved.

The following is a list of each retirement system and the investment counselor, consultant and custodian retained by each retirement system as of December 31, 1994.

ADAMS RETIREMENT SYSTEM

Taylor Investments (5/25/89)

Custodian: BayBank

AMESBURY RETIREMENT SYSTEM

Boston Financial Management, Inc. (4/17/85)

Bank of Ireland Asset Management (9/8/93)

Consultant: The Hannah Group

Custodian: State Street Bank

ANDOVER RETIREMENT SYSTEM

Harbor Capital Management Company, Inc. (12/31/93)

Custodian: State Street Bank

ARLINGTON RETIREMENT SYSTEM

Fleet Investment Advisors (3/5/85)

State Street Bank & Trust Company (2/6/92)

Consultant: Wilshire Associates

Custodian: State Street Bank

ATHOL RETIREMENT SYSTEM

Shawmut Bank, N.A. (6/25/85)

PaineWebber Properties III (12/22/88)

PaineWebber Independent Fund (8/8/89)

Custodian: Shawmut

ATTLEBORO RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (4/1/85)

PaineWebber Properties II (12/22/88)

Custodian: BayBank

BARNSTABLE COUNTY RETIREMENT SYSTEM

Aeltus Investment Management (7/27/89)
Aeltus Investment Management - Real Estate (7/27/89)
Aeltus Investment Management - International Equity (7/27/89)
U.S. Trust Asset Management (4/24/92)
Putnam Advisory Company (9/30/93)
Thompson, Siegel & Walmsley (9/30/93)

Consultant: Mercer Asset Planning, Inc.
Custodian: Bank of Boston

BELMONT RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (5/24/89)
Oppenheimer Capital (6/30/89)
Putnam Global Fixed Income (11/19/92)
Putnam International Equity Management (11/19/92)

Consultant: New England Pension Consultants
Custodian: BayBank

BERKSHIRE COUNTY RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (2/23/87)
Freedom Capital Management Corporation (7/7/93)

Custodian: Bank of Boston

BEVERLY RETIREMENT SYSTEM

Aeltus Investment Management - Real Estate (8/31/89)
PanAgora Asset Management-Asset Allocation Fund (6/24/92)
Munder Capital Management (10/8/92)
Income Research & Management (1/21/93)
Putnam Fiduciary Trust Companies (7/21/94)
Bank of Ireland Asset Management (7/21/94)

Consultant: New England Pension Consultants
Custodian: State Street Bank

BLUE HILLS REGIONAL VOCATIONAL SCHOOL EMPLOYEES RETIREMENT SYSTEM

David L. Babson (4/12/85)

Custodian: Bank of Boston

BOSTON RETIREMENT SYSTEM

Wellington Management Company (2/21/85)
Liberty Investment Management (11/14/86)
PanAgora Asset Management (11/14/86)
Avatar Associates (11/14/86)
Bear Stearns, Inc. (2/4/87)
Oechsle International Advisors (6/30/87)
Warburg Investment Management International Ltd. (7/15/87)
Copley Partners I & II (8/11/87)
Frank Russell Trust (8/11/87)
Invesco Realty Advisors (8/11/87)
LaSalle Adv. Urban Site Vent. II and LaSalle Fund III (8/11/87)
Property Capital Advisors (8/11/87)
Public Storage Institutional Fund II (8/11/87)
State Street Bank & Trust Company (12/12/88)
Back Bay Advisors (9/7/89)
Massachusetts Financial Services (9/7/89)
Richmond Capital Management (9/7/89)
Metric Institutional Realty Advisors (9/7/89)
Criterion Investment Management (9/14/89)
Heitman Advisory Corporation (11/17/89)
MIG Realty Advisors (12/19/89)
Shurgard Institutional Fund L.P. II (5/11/90)
Global Advisors (5/11/90)
Thomas H. Lee Equity Partners, L.P. (5/11/90)
BEA Associates, Inc. (4/25/91)
Schroder Real Estate Value Enhancement Fund B, L.P. (5/5/92)
PCA Realty Advisors-Ruggles Center I (7/16/92)
New England Growth Fund I, L.P. (7/16/92)
RhumbLine Advisers (5/25/93)
Zevenbergen Capital (5/25/93)
Target Investors, Inc. (9/2/93)
Thorsell Parker Partners (9/2/93)
Chancellor Capital Management (1/27/94)
Templeton Investment Counsel (11/17/94)

Consultant: SEI

Custodian: State Street Bank

BRAINTREE RETIREMENT SYSTEM

1838 Investment Advisors (9/9/86)

Custodian: BayBank

BRISTOL COUNTY RETIREMENT SYSTEM

Palmer Organization III L.P. (5/20/87)
BayBanks Investment Management, Inc. (3/16/88)
Aeltus Investment Management - Real Estate (2/23/89)
BayBanks Investment Management, Inc. (7/5/89)
Charles River Partnership, VII (9/29/94)
Metric Apartment Co-Investment Trust (9/29/94)

Custodian: BayBank

BROCKTON RETIREMENT SYSTEM

Loomis Sayles & Company (6/7/89)
Freedom Capital Management Corporation (6/7/89)
Keystone Investment Management Corporation (3/1/90)
Lehndorff & Babson Fund IV (5/11/90)
Bank of Ireland Asset Management (6/15/90)
Boston Capital Ventures II (11/26/91)
Alliance Capital Management (3/24/93)
Boston Capital Ventures/Business Development Partners (12/15/94)

Consultant: The Hannah Group

Custodian: Mellon Trust

BROOKLINE RETIREMENT SYSTEM

State Street Research (6/26/86)
State Street Research - International (8/24/89)
Pension Reserves Investment Trust (PRIT) Fund (9/30/89)
Loomis Sayles & Company (1/28/93)

Consultant: Wyatt Asset Services, Inc.

Custodian: State Street Bank

CAMBRIDGE RETIREMENT SYSTEM

Freedom Capital Management Corporation (11/9/90)
Aeltus Congregate Care Fund (11/9/90)
Wellington Management Company (11/9/90)
State Street Research & Management Company (11/9/90)
Bank of Ireland Asset Management (11/9/90)
Shawmut Investment Advisers (7/16/93)

Consultant: Segal Advisors

Custodian: State Street Bank

CHELSEA RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (8/24/89)
EuroPacific Growth Fund (7/21/94)

Custodian: BayBank

CHICOPEE RETIREMENT SYSTEM

Freedom Capital Management Corporation (6/26/86)
Leonard Management Group (3/21/88)
State Street Research & Management Company (11/24/89)
Metric Institutional Apartment Fund II, L.P. (2/18/92)
Met Life/State Street Research - Cap. App. #43 (11/27/91)
MassMutual Participation Investors (11/27/91)

Custodian: BayBank

CLINTON RETIREMENT SYSTEM

Aeltus Investment Management (2/14/91)
Aeltus Investment Management - Real Estate (2/14/91)
Aeltus Investment Management - International Equity (2/14/91)
Alliance Capital Management (6/30/94)
Pimco Low Duration Fund (7/7/94)
Pimco Total Return Fund (7/7/94)
Newberger & Berman Guardian Fund (7/7/94)
Janus Fund (7/7/94)
Mutual Series Beacon Fund (7/21/94)
20th Century Select Fund (7/21/94)
20th Century Ultra Fund (7/21/94)
Templeton Foreign Fund (7/21/94)
Scudder International Bond Fund (7/28/94)

Consultant: Starr Financial Services

CONCORD RETIREMENT SYSTEM

Fleet Investment Advisors (5/21/86)
Frank Russell Equity I Fund (5/21/86)
Pension Reserves Investment Trust (PRIT) Fund (6/1/90)

Custodian: Fleet Bank

DANVERS RETIREMENT SYSTEM

Boston Financial Management, Inc. (4/3/85)

Custodian: State Street Bank

DEDHAM RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (6/30/88)

DUKES COUNTY RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (5/12/92)

Custodian: BayBank

EASTHAMPTON RETIREMENT SYSTEM

Wright Investors Service (10/13/93)

Custodian: Investors Bank and Trust/Greenfield Savings Bank

ESSEX COUNTY RETIREMENT SYSTEM

Freedom Capital Management Corporation (5/6/85)

State Street Research & Management Company (1/4/90)

Bank of Ireland Asset Management (2/10/94)

David L. Babson (3/10/94)

Consultant: Segal Advisors

Custodian: BayBank

EVERETT RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (2/15/85)

New England Growth Fund I, L.P. (6/30/93)

Custodian: BayBank

FAIRHAVEN RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/1/86)

FALL RIVER RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (8/27/85)

Custodian: BayBank

FALMOUTH RETIREMENT SYSTEM

State Street Bank & Trust Co. (4/3/85)

Custodian: State Street Bank

FITCHBURG RETIREMENT SYSTEM

Safety Fund National Bank (4/19/85)

Custodian: Safety Fund National Bank

FRAMINGHAM RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (11/28/86)
State Street Research S. Africa Free Equity Fund #68 (10/17/90)
State Street Research Bond Fund #41 (10/17/90)
GFM International Investors, Ltd. (10/9/91)

FRANKLIN COUNTY RETIREMENT SYSTEM

Freedom Capital Management Corporation (3/31/88)
Metropolitan Life Market Plus (4/24/92)

Custodian: State Street Bank

GARDNER RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (12/1/86)

GLOUCESTER RETIREMENT SYSTEM

Freedom Capital Management Corporation (4/19/85)

Consultant: New England Pension Consultants

Custodian: BayBank

GREATER LAWRENCE SANITARY DISTRICT AUTHORITY RETIREMENT SYSTEM

Beacon Fiduciary Advisors, Inc. (5/23/90)

Custodian: Brown Brothers Harriman

GREENFIELD RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (2/25/87)
PaineWebber Properties III (4/17/89)
Harbor Capital Management Company, Inc. (3/14/91)
Babson-Stewart Ivory International L.P. III (9/30/93)

Consultant: The Hannah Group

Custodian: State Street Bank

HAMPDEN COUNTY RETIREMENT SYSTEM

Freedom Capital Management Corporation (10/13/88)
Wellington Management Company (5/8/91)
Wellington International Stock Portfolio (9/29/94)

Consultant: Prudential Securities, Inc.

Custodian: BayBank

HAMPSHIRE COUNTY RETIREMENT SYSTEM

Fleet Investment Advisors (10/26/89)
Bank of Ireland Asset Management (12/12/90)
Lehndorff & Babson Property Fund IV (1/29/91)
Shurgard Institutional Fund L.P. II (1/29/92)
RhumbLine Advisers (2/25/92)
Wellington Management Company (11/12/92)
Sentinel Realty Advisors (6/3/93)
Freedom Capital Management Corporation (12/22/94)
Van Kampen Merritt (12/22/94)

Consultant: The Hannah Group
Custodian: State Street Bank

HAVERHILL RETIREMENT SYSTEM

The Boston Company (7/8/85)
Lehndorff & Babson Property Fund III (10/27/88)
Taylor Investments (1/15/91)
Phoenix Investment Counsel, Inc. (1/15/91)
New England Growth Fund I, L.P. (1/21/92)
Babson-Stewart Ivory International L.P. III (1/21/92)
Commonwealth BioVentures IV L.P. (1/21/92)
Shurgard Partners L.P. II (1/21/92)
Lehndorff & Babson Property Fund IV (1/21/92)
Scudder, Stevens & Clark (6/10/93)
Metric Institutional Realty Advisors (7/29/93)
Bank of Ireland Asset Management (8/5/93)
NorthBridge Venture Partners (3/24/94)

Consultant: Legg Mason Wood Walker
Custodian: BayBank

HINGHAM RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/1/90)

HOLYOKE RETIREMENT SYSTEM

Freedom Capital Management Corporation (12/6/85)

Consultant: Segal Advisors
Custodian: BayBank

HULL RETIREMENT SYSTEM

Capital House Investment Management (10/16/90 - Term. 11/17/94)

Custodian: State Street Bank

LAWRENCE RETIREMENT SYSTEM

National Investment Services of America, Inc. (1/24/86)

Custodian: BayBank

LEOMINSTER RETIREMENT SYSTEM

Safety Fund National Bank (4/1/85)

Custodian: Safety Fund National Bank

LEXINGTON RETIREMENT SYSTEM

Wellington Management Company (1/25/89)
Fidelity Capital Appreciation Fund (3/31/94)
Fidelity Contra Fund (3/31/94)
Fidelity Magellen Fund (3/31/94)
Fidelity Value Fund (3/31/94)
Fidelity Fund (3/31/94)

Custodian: BayBank

LOWELL RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/10/87)
Shurgard Institutional Fund L.P. (4/6/89)
Shawmut Investment Advisers (9/14/89)
Metric Apartment Fund (2/8/90)
Charles River Partnership VI-A (5/2/91)
United States Trust Asset Management (5/22/91)
Heitman Real Estate Fund V (1/14/92)
New England Growth Fund I, L.P. (2/19/92)
Bank of Ireland Asset Management (8/5/93)
Lehndorff & Babson Real Estate Counsel Fund V (2/3/94)
Harbor Capital Management (2/3/94)
Metric Apartment Co-Investment Trust (2/3/94)
Wertheim Schroder Investment Services (9/29/94)
Federated Investors' Service (12/15/94)
Charles River Partnership VII (12/15/94)

Consultant: The Hannah Group

Custodian: BayBank

LYNN RETIREMENT SYSTEM

de Burlo Group (3/26/85)
Palmer Organization III L.P. (5/20/87)

Consultant: Segal Advisors

Custodian: BayBank

MALDEN RETIREMENT SYSTEM

de Burlo Group (3/27/85)

Custodian: State Street Bank

MARBLEHEAD RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (2/1/94)

MARLBOROUGH RETIREMENT SYSTEM

Freedom Capital Management Corporation (6/23/88)

Eaton Vance Management (9/15/93)

Putnam S. Africa Free Intn'l Equity Commingled Fund (1/27/94)

Consultant: The Hannah Group

Custodian: BayBank

MASSACHUSETTS HOUSING FINANCE AGENCY RETIREMENT SYSTEM

Freedom Capital Management Corporation (3/30/93)

Van Kampen Merritt Management, Inc. (3/30/93)

Custodian: BayBank

MASSACHUSETTS PORT AUTHORITY RETIREMENT SYSTEM

Wellington Management Company (2/7/85)

Copley Partners I & II (10/22/86)

Wellington South Africa Free International Fund (11/24/89)

Consultant: Wyatt Asset Services, Inc.

Custodian: Shawmut

MASSACHUSETTS TURNPIKE AUTHORITY RETIREMENT SYSTEM

PanAgora Asset Management (4/4/94)

Wellington Management Company (4/4/94)

Consultant: New England Pension Consultants

Custodian: Shawmut

MASSACHUSETTS WATER RESOURCES AUTHORITY RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (2/1/88)

Boston Company (2/11/88)

Bank of Ireland Asset Management (6/10/93)

Putnam Institutional Management (6/10/93)

Consultant: The Hannah Group

Custodian: Fleet Bank

MAYNARD RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (12/4/91)

Custodian: BayBank

MEDFORD RETIREMENT SYSTEM

Fleet Investment Advisors (3/14/85)

Lehndorff & Babson IV (3/12/90)

Shurgard Realty Advisors II (3/12/90)

Connecticut Investment Management, Inc. (8/14/91)

PCA Realty Advisors/Ruggles Center I (3/4/92)

Babson-Stewart Ivory International L.P. III (7/28/92)

Loomis Sayles & Company (7/7/94)

Glickenhause & Company (7/7/94)

Consultant: The Hannah Group

Custodian: State Street Bank

MELROSE RETIREMENT SYSTEM

Fleet Investment Advisors (4/3/85)

Lehndorff & Babson IV (7/27/89)

EuroPacific Growth Fund (3/25/92)

Custodian: Fleet Bank

METHUEN RETIREMENT SYSTEM

David L. Babson (10/16/86)

Custodian: Fleet Bank

MIDDLESEX COUNTY RETIREMENT SYSTEM

Fleet Investment Advisors (3/26/85)

Oppenheimer Capital (8/25/87)

Income Research & Management (9/28/89)

Invesco Management & Research, Inc. (9/28/89)

Lehndorff & Babson IV (2/1/90)

Metric Institutional Apartment Fund (2/1/90)

Metropolitan Life (2/1/90)

Shurgard Institutional Fund L.P. II (2/1/90)

Bank of Ireland Asset Management (1/10/91)

Alliance Capital Management (1/10/91)

Commonwealth BioVentures III L.P. (3/27/91)

Charles River Partnership VI-A (4/10/91)

BayBanks Investment Management, Inc. (5/30/91)

New England Growth Fund I, L.P. (2/18/92)

Metric Institutional Apartment Fund II, L.P. (2/18/92)

Rice Capital Group III, L.P. (2/18/92)

PCA Realty Advisors/Ruggles Center I (3/4/92)

MIDDLESEX COUNTY RETIREMENT SYSTEM (cont'd)

Equitable Real Estate Value Enhancement Fund (12/10/92)
Loomis, Sayles and Company (12/10/92)
Van Kampen Merritt Management, Inc. (12/10/92)
Diversified Investment Advisors (3/3/93)
Merrill Lynch Asset Management (4/8/93)
The Putnam Companies (4/8/93)
Harbor Capital Management (7/16/93)
J&W Seligman (12/2/93)
Metric (MAC Trust) (12/9/93)
Corcoran Jennison Apartment Fund (1/27/94)
Weiss, Peck & Greer (3/10/94)
Loomis Sayles & Company (6/9/94)
Zero Stage Capital (6/30/94)
Guinness Flight Investment Management (8/4/94)
IDS Advisory Group (8/11/94)
Pioneer Ventures, L.P. II (10/13/94)
Seix Investment Advisors (11/7/94)
Bachow and Associates (12/15/94)

Consultant: The Hannah Group
Custodian: BayBank

MILFORD RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (1/18/89)

Custodian: BayBank

MILTON RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/1/86)

**MINUTEMAN REGIONAL VOCATIONAL TECHNICAL SCHOOL DISTRICT
RETIREMENT SYSTEM**

Pension Reserves Investment Trust (PRIT) Fund (7/1/85)

MONTAGUE RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/1/86)

NATICK RETIREMENT SYSTEM

United Investment Counsel (3/14/85)
State Street Research Bond Fund #41 (11/27/91)
State Street Research South Africa Free Fund #68 (1/29/92)

Custodian: BayBank

NEEDHAM RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/1/85)

NEW BEDFORD RETIREMENT SYSTEM

Massachusetts Financial Services (6/15/89)
Aeltus Investment Management (6/15/89)
Aeltus Investment Management - Real Estate (6/15/89)
Aeltus Investment Management - International Equity (6/15/89)
Pension Reserves Investment Trust (PRIT) Fund (4/1/92)
BayBanks Investment Management, Inc. (10/1/92)

Consultant: Wyatt Asset Services, Inc.

Custodian: BayBank

NEWBURYPORT RETIREMENT SYSTEM

Boston Financial Management, Inc. (3/28/85)

Custodian: State Street Bank

NEWTON RETIREMENT SYSTEM

1838 Investment Advisors (3/19/87)
Freedom Capital Management Corporation (3/19/87)
Phoenix Investment Counsel (1/21/92)
David L. Babson (1/21/92)
Putnam South Africa Free International Fund (5/27/93)

Consultant: Segal Advisors

Custodian: Mellon Trust

NORFOLK COUNTY RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (11/1/85)
Wellington Management (6/24/93)
Investment Advisors (12/9/93)
Loomis Sayles & Company (12/23/93)
Thompson, Siegel & Walmsley (12/30/93)
Keystone Investment Management (1/27/94)
RhumbLine Advisers (7/7/94)

Consultant: The Hannah Group

Custodian: Bank of Boston

NORTH ADAMS RETIREMENT SYSTEM

de Burlo Group (3/25/85)

Custodian: Fleet Bank

NORTH ATTLEBORO RETIREMENT SYSTEM

PaineWebber Properties III (10/27/88)
PaineWebber Properties II (6/22/89)
PaineWebber Independent Fund (7/13/89)
Connecticut National Bank (12/26/90)
Babson-Stewart Ivory International L.P. III (12/26/91)
RhumbLine Advisers (10/1/92)
Freedom Capital Management Corporation (2/11/93)

Consultant: The Hannah Group
Custodian: BayBank

NORTHAMPTON RETIREMENT SYSTEM

de Burlo Group (4/18/85)

Custodian: BayBank

NORTHBRIDGE RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (1/1/88)

NORWOOD RETIREMENT SYSTEM

Dean Witter Realty Yield Plus L.P. (11/2/89)
EuroPacific Growth Fund (1/7/92)
David L. Babson (10/27/94)
Boston Company (10/27/94)
Legg Mason Capital Management (11/17/94)

Consultant: Mercer Asset Planning, Inc.
Custodian: BayBank

PEABODY RETIREMENT SYSTEM

Freedom Capital Management Corporation (7/8/85)

Custodian: BayBank

PITTSFIELD RETIREMENT SYSTEM

Freedom Capital Management Corporation (6/15/89)

Custodian: Bank of Boston

PLYMOUTH RETIREMENT SYSTEM

State Street Bank (2/24/89)
Morgan Grenfell Investment Services (7/7/94)
Templeton Investment Counsel (7/7/94)
Bankers Trust (11/17/94)
Loomis Sayles & Company (12/22/94)

Consultant: New England Pension Consultants
Custodian: State Street Bank

PLYMOUTH COUNTY RETIREMENT SYSTEM

Babson-Stewart Ivory International L.P. III (5/4/89)
Lehndorff & Babson III (5/4/89)
Shurgard Institutional Fund L.P. (5/4/89)
Metric Institutional Apartment Fund, L.P. (10/5/89)
Charles River Partnership VI-A (3/26/91)
American Network Group Institutional Fund I, L.P. (4/11/91)
Shurgard Storage Centers (1/14/92)
New England Growth Fund I, L.P. (7/1/92)
PW Trust GIC Fund (1/28/93)
Merrill Lynch Asset Management (11/19/93)
Corcoran Jennison Apartment Fund (1/27/94)
Metric Apartment Co-Investment Trust (1/27/94)
Charles River Partnership VII (10/27/94)

Consultant: The Hannah Group
Custodian: State Street Bank

QUINCY RETIREMENT SYSTEM

Massachusetts Financial Services (2/9/89)
Pension Reserves Investment Trust (PRIT) Fund (3/1/90)
RhumbLine Advisers (3/13/92)
Freedom Capital Management (11/17/94)

Consultant: Wyatt Investment Consulting, Inc.
Custodian: State Street Bank

READING RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (6/1/88)

REVERE RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (10/3/94)

SALEM RETIREMENT SYSTEM

Freedom Capital Management Corporation (11/17/88)
PaineWebber Properties III (11/17/88)
1838 Investment Advisors (4/12/90)
Bank of Ireland Asset Management (8/4/94)

Consultant: The Hannah Group
Custodian: BayBank

SAUGUS RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/1/86)

SHREWSBURY RETIREMENT SYSTEM

Income Research & Management (7/29/93)
Putnam Institutional Management (7/29/93)
Putnam Fiduciary Trust (1/27/94)
Julius Baer International Government Bond Portfolio (12/22/94)

Consultant: The Hannah Group
Custodian: Bank of Boston

SOMERVILLE RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (2/19/92)
Standish, Ayer & Wood, Inc. (4/15/92)
Shawmut Investment Advisers (3/25/93)
Loomis Sayles & Company (3/25/93)
Lazard Freres (6/30/94)

Custodian: BayBank

SOUTHBRIDGE RETIREMENT SYSTEM

Freedom Capital Management Corporation (11/9/89)

Consultant: Segal Advisors
Custodian: State Street Bank

SPRINGFIELD RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (1/2/92)
Freedom Capital Management Corporation (1/2/92)
MassMutual Life Insurance Company (1/2/92)
Wellington Management Company (1/2/92)

Consultant: Wyatt Asset Services, Inc.
Custodian: BayBank

STATE EMPLOYEES' RETIREMENT SYSTEM

The State Employees' Retirement System invests in the MASTERS Trust managed by the Office of the Treasurer. See list of investment counselors for the MASTERS Trust.

STONEHAM RETIREMENT SYSTEM

Lehndorff & Babson Property Fund III (11/17/88)
Lehndorff & Babson Property Fund IV (1/15/91)
Independence Investment Associates (12/10/91)
Bank of Ireland Asset Management (3/24/94)

Consultant: The Hannah Group
Custodian: BayBank

SWAMPSCOTT RETIREMENT SYSTEM

de Burlo Group (3/27/85)

Custodian: Fleet Bank

TAUNTON RETIREMENT SYSTEM

U.S. Trust Company (6/25/85)

Lehndorff & Babson Property Fund IV (12/21/89)

EuroPacific Growth Fund (5/16/90)

Wellington International Stock Portfolio (8/31/94)

Consultant: Segal Advisors

Custodian: U.S. Trust

TEACHERS' RETIREMENT SYSTEM

The Teachers' Retirement System invests in the MASTERS Trust managed by the Office of the Treasurer. See list of investment counselors for the MASTERS Trust.

WAKEFIELD RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (7/1/85)

WALTHAM RETIREMENT SYSTEM

BayBanks Investment Management, Inc. (2/11/85)

Custodian: BayBank

WATERTOWN RETIREMENT SYSTEM

Lehndorff & Babson Property Fund III (10/5/89)

Invesco Management & Research, Inc. (10/5/89)

Wellington Management Company (3/20/91)

Consultant: Dahab Associates, Inc.

Custodian: BayBank

WEBSTER RETIREMENT SYSTEM

Loomis Sayles & Company (2/24/94)

Consultant: Mercer Asset Planning, Inc.

Custodian: BayBank

WELLESLEY RETIREMENT SYSTEM

Standish, Ayer & Wood (2/27/85)
Standish Small Equity Fund (11/17/88)
State Street Research & Management Company (1/23/90)
Consolidated Standish Short-Term Asset Reserve Fund (1/2/91)
Standish International Fixed Income Fund (5/8/91)
Standish International Equity Fund (11/17/94)
Scudder Investor Services (11/17/94)

Consultant: Mercer Asset Planning, Inc.
Custodian: Shawmut

WESTFIELD RETIREMENT SYSTEM

PaineWebber Properties III (11/17/88)
PaineWebber Properties II (9/14/89)
Freedom Capital Management Corporation (10/16/90)
State Street Research & Management Company (10/16/90)
Loomis Sayles & Company (1/21/93)

Custodian: BayBank

WEST SPRINGFIELD RETIREMENT SYSTEM

Shawmut Bank, N.A. (2/21/86)

Custodian: Shawmut

WEYMOUTH RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund (10/1/84)

WINCHESTER RETIREMENT SYSTEM

Freedom Capital Management Corporation (4/26/90)
J. L. Kaplan (10/28/93)

Custodian: BayBank

WINTHROP RETIREMENT SYSTEM

Bear Stearns (7/29/93)

Custodian: BayBank

WOBURN RETIREMENT SYSTEM

David L. Babson (3/21/88)

Custodian: BayBank

WORCESTER RETIREMENT SYSTEM

Fleet Investment Advisors (1/14/87)
State Street Research & Management (3/6/91)
Metropolitan Life Insurance Closed-End II Fund (3/6/91)
BEA Associates (8/15/91)
Bank of Ireland Asset Management Ltd. (8/15/91)
Investment Advisors, Inc. (3/11/92)
New England Growth Fund I, L.P. (3/11/92)
Shawmut Investment Advisers (3/11/92)
Rice Capital Group III, L.P. (3/11/92)
David L. Babson (7/30/92)
Merrill Lynch Asset Management (2/12/93)
Putnam World Income Trust Fund (7/26/93)
MIG (7/29/93)
Equitable Value Enhancement Fund (7/29/93)
Metric Apartment Co-Investment Trust (7/29/93)
Lehndorff & Babson Property Fund IV (8/19/93)
Taylor Investments (9/30/93)
Pioneer Ventures L.P. II (10/13/94)
Boston Capital Ventures, III (11/7/94)
Dillon Read Venture Partners, III (12/22/94)

Consultant: The Hannah Group
Custodian: State Street Bank

WORCESTER COUNTY RETIREMENT SYSTEM

Wellington Management Company (8/21/91)
Harbor Capital Management (9/8/93)
David L. Babson (9/8/93)
Bank of Ireland Asset Management (9/8/93)
Freedom Capital Management Corporation (9/15/93)
Pioneer Ventures, L.P. II (9/29/94)
TA Associates (9/29/94)
The Putnam Companies (9/29/94)
Allmerica Asset Management (9/29/94)
Copley Venture Partners, L.P. III (10/6/94)
Loomis Sayles & Company (10/6/94)

Consultant: Segal Advisors
Custodian: BayBank

The **PENSION RESERVE INVESTMENT TRUST (PRIT)** Fund has retained the following investment counselors as of December 31, 1994:

Domestic and International Equity Managers:

Alliance Capital-Management Corporation
Babson Stewart-Ivory
Banker's Trust Company
Batterymarch Financial
The Boston Company Institutional Investors
Brown Capital Management, Inc.
Capital Guardian Trust Company
Cursitor Eaton Asset Management
Emerging Markets Management
Fidelity Investments
Kennedy Capital Management
Lombard Odier International Portfolio Management, Ltd.
Massachusetts Financial Services
Pareto Partners
Putnam Advisory Company
RhumbLine Advisors
Scudder, Stevens & Clark
State Street Bank & Trust Company
Trust Company of the West
ValueQuest, Ltd.

Domestic and International Fixed Income Managers:

Bankers Trust
Baring International Asset Management, Ltd.
Equitable Capital Management Corporation
Fidelity Management
W.R. Huff Asset Management
Massachusetts Financial Services
Pacific Investment Management Company
The Putnam Advisory Company, Inc.
N.M. Rothschild International Asset Management
Standish, Ayer & Wood
TCW Asset Management Company

Real Estate Managers:

Aldrich, Eastman & Waltch
Alex, Brown Kleinwort Benson Realty Advisors
Bear Stearns
Boston Financial Group
Copley Real Estate Advisors, Inc.
Equitable Real Estate Investment Management
Hancock Realty Advisors
Heitman Advisory Corporation
Invesco Realty Advisors
JMB Institutional Realty
Massachusetts Mutual Life Insurance Company
T.A. Associates Realty
TCW Realty Advisors

Domestic and International Venture Capital and Special Equity Managers:

Advent Network
Arral Pacific Equity Trust
Alan Patricof Associates, Ltd.
APAX Partners
Boston Ventures
Belmont Capital
Wm. Blair Mezzanine Fund
Blackstone Group
Commonwealth BioVentures
Davis Venture Partners
Donaldson, Lufkin & Jenrette Merchant Banking
Dominion Venture Partners
1818 Fund
Equitable Capital Management Corporation
Forstmann Little & Company
Freeman Spogli
Golder, Thoma and Cressey
Hancock Venture Capital Management
Invexco Inc.
Joseph Littlejohn & Levy
Kohlberg, Kravis & Roberts and Company
Landmark Equity Partners
Madison Group
Massachusetts Technology Development Corporation
Morgan Holland Partners
Nash and Sells
Schroder UK Buyout Fund
Smith Offshore Exploration Company
Southern California Ventures

***Domestic and International Venture Capital and Special Equity Managers
(cont'd):***

T.A. Associates
Thomas H. Lee Acquisitions
Venture Capital Fund of New England
Vista Partners

Consultants

Wilshire Associates
Pathway Associates
Morris & Morse

Custodian

State Street Bank and Trust Company

The **MASTERS** Trust has retained the following external investment counselors as of December 31, 1994:

DOMESTIC FIXED INCOME:

Dodge & Cox
Loomis, Sayles & Company
Morgan Grenfell
PanAgora Asset Management
Putnam Companies
Sentry Financial Corporation
Standish Ayer & Wood
Smith Barney
Trust Company of the West

GLOBAL FIXED INCOME:

Massachusetts Financial Services
The Putnam Companies
Scudder, Stevens & Clark International

DOMESTIC EQUITY:

Alliance Capital Management
Chancellor Capital Management, Inc.
Dimensional Fund Advisors
Fidelity Management Trust Company
Goldman Sachs & Company
Independence Investment Associates
Massachusetts Financial Services
Numeric Investors, L.P.
State Street Global Advisors
The Boston Company

INTERNATIONAL EQUITY:

B.E.A. Associates
Fidelity Management Trust Company
HSBC Asset Management Hong Kong
PanAgora Asset Management

ALTERNATIVE TYPE INVESTMENTS:

Massachusetts Fiduciary Advisors

REAL ESTATE:

Aetna Life Insurance
Aldrich, Eastman & Waltch
Bear Stearns Asset Management
Copley Real Estate Advisors
First Chicago - Brinson Partners
Franklin Properties, Inc.
Hancock Realty Investors
Lehndorff & Babson Real Estate Council
Meridian Point Company
Metric Institutional Realty Advisors
Public Storage Institutional Realty
Shurgard Institutional
The Sierra Capital Realty Trust
TA Associates Realty Trust

VENTURE CAPITAL:

Beta Partners Limited Partnership
Bigler Crossroads Investment Management Company
Clayton & Dublier
Frontenac Company
Hancock Venture Partners
Prudential Equity Investors
Media Communication Partners
Narragansett Capital, Inc.
New Enterprise Associates
The Vista Group
Thomas H. Lee Equity Partners
Welsh, Carson, Anderson & Stowe

CONSULTANT:

Pathway Capital Management, Inc.
The Townsend Group
Wilshire Associates, Inc.

CUSTODIAN:

Mellon Trust

PENSION INVESTMENT ADVISORY UNIT

ROBERT P. SHAW

Director

VICTORIA MARCORELLE

Supervisor

ROSAMOND C. COTTER

Fund Accountant

KEVIN D. MORRISON

Examiner

ROSE CIPRIANI

Administrative Assistant

**DIVISION OF PUBLIC EMPLOYEE
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